

# The Mining Journal.

## RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

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LONDON, SATURDAY, NOVEMBER 15, 1879.

[WITH SUPPLEMENT.] PRICE ..... SIXPENCE.  
PER ANNUM, BY POST, £1 4s.

**MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,**  
AND MINING SHARE DEALER,  
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.  
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.

BUSINESS negotiated in Stocks and Shares not having a general market value.  
Every Friday a general and reliable List issued (a copy of which will be forwarded regularly on application), containing closing prices of the week.

MINES INSPECTED.  
BANKERS: CITY BANK, LONDON—SOUTH CORNWALL BANK, ST. AUUSTELL.

SPECIAL DEALINGS in the following, or part:—  
30 Assheton, 22s. 25 Eberhardt, £3 1s. 3d. 20 Panulicillo, £4 3s. 9d.  
50 Almada, 7s. 3d. 50 Flagstaff, 32s. 100 Pestarena, 8s. 3d.  
20 Canada Gold, £2 10s. 50 Frontino, £2 10s. 50 Parys Copper, 17s. 3d.  
35 Clementina, 50 Glyn United, £2 10s. 20 Richmond, £2 10s.  
25 Colorado, 36s. 3d. 25 Herodfoot, £2 10s. 20 South Darren, £2 10s.  
25 Devon Consols, £4 10s. 100 Javali, 8s. 20 Tankerville, £5 10s.  
20 East Caradon, £3 1s. 3 100 Killifreth, 12s. 6d. 10 Van, £22.  
20 East Lovell, £2 10s. 25 Leadhills, £4. 25 West Asheton, £2 10s.  
20 East Van, £2 10s. 10 Mineral Corporation, 20 West Chiverton, £5.  
75 East Roman Gravel, 20 Moria Du, 16s. 20 Wheel Crebor, £5 13s. 9d.  
50 Pandora, 13s.

BUSINESS in MINERAL CORPORATION Shares.  
SPECIAL BUSINESS in all TIN Shares.  
\*\* SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

RAILWAYS—SPECIAL BUSINESS.  
FOREIGN BONDS—SPECIAL BUSINESS.  
Fortnightly accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.  
ESTABLISHED 1842.

**MR. W. H. BUMPUS, STOCK AND SHARE BROKER,**  
AND MINING SHARE DEALER,  
44, THREADNEEDLE STREET, LONDON, E.C.  
ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES and MISCELLANEOUS SHARES of every description.  
RAILWAYS, BANKS, FOREIGN and COLONIAL BONDS.  
TRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS.  
Accounts opened for the Fortnightly Settlement  
A Stock and Share List free on application.

Mr. BUMPUS has SPECIAL BUSINESS in the undermentioned:—  
50 Almada, 7s. 3d. 25 Eberhardt, £3 1s. 3d. 20 New Quebrada, £3 10s.  
40 Assheton, 22s. 50 East Crebor, 50 Nouveau Monde, 15s.  
100 Bodidris, 10 East Chiverton, £2 10s. 40 Pateley Bridge, 16s.  
30 Blue Tent, £2. 20 East Van, £2 10s. 50 Pestarena, 8s. 6d.  
50 Colorado, 36s. 3d. 50 Flagstaff, 30s. 6d. 50 Parys Copper, 18s.  
2 Carn Brea, £55. 30 Frontino, £2 10s. 15 Roman Gray, £11 10s.  
10 Cape Copper, £31 10s. 25 Great Holway, 25 Richmond, £2 10s.  
25 Canada Gold, 25 Gawn, 25 Ruby, £3 10s.  
75 Don Pedro, 13s. 25 Gunnislake (Clitters), 25 South Crebor, 25 Tamar Silver-Lead.  
20 Drakewalls, 25 Hingston, 10s. 6d. 50 Van, £22.  
25 Devon Consols, £4 10s. 30 Herodfoot, £2 10s. 35 Wheel Grenville, £5 10s.  
3 Dolcoath, £55 10s. 30 Killifreth, 13s. 6d. 30 West Asheton, £2 10s.  
40 Derwent, 10 Killifreth, £4. 15 Wheel Peavor, 15 West Chiverton, £5.  
5 East Pool, £21. 15 Leadhills, £4. 15 Wheel Peavor, 15 West Chiverton, £5.  
20 East Caradon, £3 10s. 25 Marke Valley, 29s. 15 Wheel Peavor, 15 West Chiverton, £5.  
40 East Roman Gravel, 10 Mellanear, £4 10s. 15 Wheel Peavor, 15 West Chiverton, £5.  
15 East Lovell, £2 11s. 3d.

IMPORTANT TO INVESTORS.  
Large profits may be realised by the purchase of SHARES in SOUND well-selected MINES at present prices. Many of these are likely to advance considerably in market value during the next few months.

Mr. BUMPUS devotes special attention to these Securities, and is in a position to afford reliable information and advice to intending investors and others.  
The following Mines are particularly recommended:—Wheal Peavor, Wheal Grenville, Wheal Jane, Wheal Peavor, Wheal Kitty, Drakewalls, East Lovell, Killifreth, East Caradon, Gunnislake (Clitters), Marke Valley, Derwent, East Chiverton, South Darren, Great Holway, West Asheton, and Panulicillo.

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

A complete and reliable List of all the Leading Investments (published on the first of each month) may be obtained free on application to—

WILLIAM HENRY BUMPUS, SWORN BROKER.  
OFFICES: 44, THREADNEEDLE STREET, LONDON, E.C.  
BANKERS: THE NATIONAL PROVINCIAL BANK OF ENGLAND, E.C.

**PENNINGTON AND CO., SWORN BROKERS,**  
3, ROYAL EXCHANGE BUILDINGS, E.C.  
Transact business in every description of Stocks and Shares.  
ESTABLISHED 1860.—BANKERS: ALLIANCE.

**FERDINAND R. KIRK, 5, BIRCHIN LANE,**  
LONDON, E.C.

FORTNIGHTLY ACCOUNTS opened, on receipt of the usual "cover," in Railways Home and Foreign, Mining Shares, Foreign Bonds, and certain Miscellaneous Securities.

"THE WEEK"—A SEPARATE EDITION from that which appears in the Mining Journal is published every Wednesday evening, containing "Notes and Hints on the Stock Markets," with Closing Prices. May be had on application.  
BANKERS: LONDON AND WESTMINSTER, Lothbury.

**MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS,**  
65, GRACECHURCH STREET, LONDON, E.C.

THE CREBOR DISTRICT.—Having our own independent agents we can furnish reliable information respecting mining properties in this neighbourhood on our usual terms.

TAMAR MINE.—This mine is in the same district as Crebor, and shares should be bought at present low price.  
BODIDRIS MINE.—Splendid specimens of ore from the Maes-y-pwll lode, just received, may be seen at our office.  
Full particulars on application to—  
Messrs. ENDEAN AND CO., 65, GRACECHURCH STREET, LONDON, E.C.

**MR. GEORGE BUDGE, STOCK AND SHARE DEALER,**  
9, GRACECHURCH STREET, LONDON, E.C. (Established 26 years).  
ALL BUSINESS TRANSACTED FREE OF ANY CHARGE FOR COMMISSION.

Notice to Investors and Speculators.  
Mr. BUDGE has SPECIAL DEALINGS in:—  
80 Bedford United, 2s. 9d. 100 Flagstaff, 32s. 6d. 100 Pestarena, 8s. 6d.  
10 Bodidris, 70 Gawn, 12s. 6d. 130 Parys Copper, 17s. 6d.  
80 Chapel House, 35 Grays Brewery, 35 Pandora, 19s.  
10 Carn Brea, £56 10s. 180 Gold Run, 2s. 6d. 20 Pennant, 20s.  
25 Cook's Kitchen, £23 10s. 100 Groswin, £4. 20 South Frances, £11 10s.  
100 Devonport and Tiverton Brewery, 200 Herodfoot, £2 10s. 20 South Darren, £2 13s. 9d.  
50 Devon Gt. Cons., 4 1/2 100 Hingston Down, 70 Sentein, 70s.  
2 Dolcoath, £54. 50 Llanrwst, 15s. 6d. 20 Tincroft, 20s.  
70 East Caradon, 100 Marke Valley, 28s. 9d. 200 West Asheton, 1 16s. 6d.  
50 East Crebor, 120 North D'eresby, 20s. 2 West Seton, £53 10s.  
50 East Van, £2 10s. 20 North Treskerby, 50 Wheel Crebor, 50s.

BUYERS or SELLERS of any of the above, or holders of any Stocks or Shares not readily marketable, will do well to apply to Mr. BUDGE.

### NOTICE OF REMOVAL.

**MR. PETER WATSON'S OFFICES**  
will be, on and after MONDAY next, at—  
18, AUSTIN FRIARS,  
OLD BROAD STREET,  
LONDON, E.C.  
Being larger and much more convenient Offices than at—  
54, OLD BROAD STREET.

### BRITISH AND FOREIGN MINES.

SHAREHOLDERS and INVESTORS desirous of PURCHASING or SELLING SHARES in COPPER, TIN, LEAD, GOLD, or SILVER MINES can do so at MARKET PRICES, and obtain INFORMATION regarding the same on PERSONAL APPLICATION, or BY LETTER, of—  
MESSRS. PETER WATSON AND CO.,  
(Late of 54, OLD BROAD STREET.)  
18, AUSTIN FRIARS,  
OLD BROAD STREET,  
LONDON, E.C.

TELEGRAPHIC MESSAGES PUNCTUALLY ATTENDED TO.

### STOCK AND SHARE MARKETS.

Prices of STOCKS and SHARES in RAILWAYS, BANKS, ENGLISH and FOREIGN GOVERNMENT SECURITIES, GAS, MINES, INSURANCE, and other Stock Exchange Securities, and various important information forwarded on application to—  
MESSRS. PETER WATSON AND CO.,  
18, AUSTIN FRIARS,  
OLD BROAD STREET,  
LONDON, E.C.

UNITED STATES AND COLONIAL MINES.  
IMPORTANT INFORMATION REGARDING THE ABOVE.  
BUYER and SELLER of SHARES at the close Market Price of the day.  
SHAREHOLDERS and INVESTORS may rely on all business being punctually and faithfully carried out.

A DAILY LIST OF PRICES sent (free) on application, either personally or by post.  
BANKERS: THE ALLIANCE BANK (Limited).  
MESSRS. PETER WATSON AND CO.,  
18, AUSTIN FRIARS,  
OLD BROAD STREET,  
LONDON, E.C.

### MR. ALFRED E. COOKE

76, OLD BROAD STREET, LONDON.  
ESTABLISHED 1853.

Investors following Mr. Cooke's advice have made LARGE SUMS of MONEY. LOW PRICED LEAD SHARES should NOW be PURCHASED. Lead will probably advance many pounds per ton. There is no cheaper LEAD SHARE to be bought than

NORTH D'ERESBY MOUNTAIN, at 20s. fully paid.  
Mr. COOKE has recently visited the Mine, and NEVER SAW IT LOOKING SO VALUABLE. Specimens from the workings can be seen at his offices.

NOTE.—The EXPENSES of any independent Inspector will be REFUNDED should his report not agree with those favourable reports already made by eminent authorities.  
FLAGSTAFF.—SPECIAL BUSINESS and INFORMATION.  
ALL BUSINESS transacted FREE of commission.  
SPECIAL BUSINESS in ALL TIN, COPPER, and LEAD SHARES at CLOSEST POSSIBLE PRICES.  
STOCK EXCHANGE BUSINESS DONE ON BEST TERMS.

ALFRED E. COOKE,  
76, OLD BROAD STREET, LONDON.  
(Adjoining the Stock Exchange and Mining Markets.)

### NORTH D'ERESBY MOUNTAIN LEAD COMPANY (LIMITED).

The BEST and CHEAPEST INVESTMENT now before the Public.

Copy of Reports of Special Surveys by several eminent Mining Engineers may be had on application to the UNDERSIGNED, who invite enquiry, and confidently recommend the PURCHASE of SHARES at par—£1 each, fully paid.

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BEAZLEY AND CO., STOCK AND SHARE DEALERS,  
9d, NEW BROAD STREET, LONDON, E.C.  
Established over Twenty Years.

### MR. CHARLES POWELL, 11, WARNFORD COURT,

THROGMORTON STREET, advises the PURCHASE of EAST CREBOR shares at £1 to £1 10s. This is the adjoining mine, and on the identical rich lodes as Wheal Crebor, the shares in which have advanced from 5s. to over £5, in four months. It is not generally known that East Crebor has produced some of the richest yellow copper ore in England, one parcel of which realised the high price of £26 15s. per ton.

Mr. POWELL has business in EAST CREBOR shares as buyer or seller at the above quotations.

### TO INVESTORS.

CREBOR AND EAST CREBOR MINES.—

These shares should be bought for permanent investment. Large reserves of ore are being opened up in the former, and the lately discovered new lode, with an aggregate value of nearly £250 per fathom for five points of operation, passes into the adjoining Mine—East Crebor. Large purchases of East Crebor Shares have been made during the week—at present prices, 25s. to 27s. 6d.—and they are especially recommended for a speedy rise in price.

Particulars and plans of J. SCOTT and Co., Palmerston Buildings, Old Broad Street, E.C.

### MR. JOHN L. M. FRASER,

(Fourteen Years at the Great Miners' Mines)  
CONSULTING MINING ENGINEER—SECRETARY AND AUDITOR—  
ROYALTY AND MINERAL ESTATE AGENT—SHARE DEALER—  
MINES, MINERALS, AND MACHINERY BROKER—  
GREENFIELD HOUSE, WREXHAM.

BONA FIDE INVESTMENTS.

In consequence of the continued advance in the price of Lead Ore and Blende, the shares of SOUND MINES are in great request, and INVESTORS should at once apply for orders to inspect the following:—

BRITISH SILVER-LEAD, Blaenau, Festinlog,  
WESTMINSTER BOG 188A, Llanarmon,  
PLAS DDU, and PARK, Llanarmon.

### MR. DAVID COWAN,

CONSULTING MINING AND MECHANICAL ENGINEER,  
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Investigations, Reports, and Valuations made of Coal, Iron, Slate, Pyrites, and other properties at home and abroad. Enquiries for Road and Railway Materials, Mining Plant, Pipes, Castings, &c. Plans, &c., of the most modern and economical mining appliances, fittings, and arrangements.

I have been long acquainted with the principal Coal and Iron Works in the North, with the Slate Quarries in North Wales, and for many years was Chief Engineer of the Tharsis Mines, Works, and Railway in Spain.

### THE "DIFFERENTIAL" PUMPING ENGINE (DAVEY'S PATENT),

FOR  
DRAINING MINES, WATER SUPPLY OF TOWNS, IRRIGATION,  
SUPPLYING DOCKS, PUMPING SEWAGE, and GENERAL  
PUMPING PURPOSES

HATHORN, DAVEY, AND CO.,  
LEEDS.

HATHORN, DAVEY, and Co. have Patterns of "Differential" Engines of all sizes, from 5 to 500-horse power, and have facilities for supplying very powerful Engines and Pumps at a short notice.  
See Illustrated Advertisement every alternate week.

**MR. CHARLES THOMAS,**  
MINING AGENT, STOCK AND SHARE DEALER,  
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**MR. ALFRED THOMAS,**  
MINING AGENT, AND STOCK AND SHARE DEALER,  
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"HOW TO TAKE ADVANTAGE OF THE COMING RISE IN PRICES."  
By ALFRED THOMAS, 10, Coleman-street, E.C.  
Will be forwarded to Investors upon application.

ALFRED THOMAS is a BUYER of the following SHARES:—  
10 Lishburne, 200 Chapel House Colliery, 100 East Caradon.  
20 Roman Gravel, 20 Great Laxey, 40 Gorseid and Merilyn  
100 Leadhills, 100 Assheton, 15 Van.  
50 West Asheton.  
Sellers will please state lowest prices.

**MR. EDWARD ASHMEAD, 62, CORNHILL, LONDON,**  
LONDON MINE AGENT, ACCOUNTANT, AND AUDITOR.

TO INVESTORS, SHAREHOLDERS, TRUSTEES.

SAFE DIVIDEND INVESTMENTS PAYING 4 TO 6 AND 10 PER CENT. PER ANNUM ON PRESENT OUTLAY.

### SHARP'S INVESTMENT CIRCULAR

THE NOVEMBER EDITION (post free),  
SHOULD BE CONSULTED BY INVESTORS AND SHAREHOLDERS.

It is a Reliable "Guide," giving valuable information and Sound Advice, &c. It gives Market prices; Dividends upon outlay, when payable; Reports, &c., &c. IT CONTAINS ALL THE SAFE INVESTMENTS IN THE FOLLOWING:—

English, Foreign Railways. Insurance, Gas, Waterworks.  
Preference, Debenture Stocks. Colonial, Foreign Stocks.  
Indian, American Stocks. British, Foreign, Colonial Mines.  
Bank, Financial Shares. Tea, Land Shares.  
Tramway, Telegraph Shares. Shipping, Dock Shares.  
Municipal Bonds. Miscellaneous Shares, &c., &c.

**HENRY GOULD SHARP, STOCK AND SHARE BROKER,**  
42, POULTRY, LONDON, E.C.—ESTABLISHED 1852.  
BANKERS: LONDON AND WESTMINSTER, Lothbury, London, E.C.

TO INVESTORS.

Well worth Buying for a Rise of 100 to 200 per cent. and Dividends.

I advise my readers to secure 500 Shares, or any less number, without delay.

### SOUTH DARREN (SILVER-LEAD) MINE, LIMITED,

CARDIGANSHIRE, WALES.

In 9000 Shares of £1 10s. each. Fully paid. Price £2 10s. to £2 15s. per share. No further liability.

This valuable and profitable Silver-Lead Mine is situated in the rich mineral district of Cardiganshire (a district which has proved immensely profitable, and in which hundreds of thousands of pounds have been paid in dividends). It is provided with the most efficient machinery for carrying on the operations without interruption.

A large new water-wheel has lately been erected, together with an auxiliary steam-engine for use during dry or frosty weather. The drawing, crushing, and dressing machinery have all been put in a substantial state on the newest and most economical principles, so that the mine is now in a position to make increased and continuous returns of lead ore, and with the present price for lead dividends will shortly be commenced, and shares rise considerably in value. They are well worth buying for dividends next year, and a rise of 100 per cent. in value during 1880.

Even under the former great disadvantages of working this property it gave the shareholders nearly £7000 in dividends, and with the present low price of lead good monthly profits are being made, therefore increased returns of ore, and an advance in lead, would put them in a dividend state in a very short time.

The present returns are 50 tons of silver-lead ore per month, which will realise £16 per ton, thus proving the lead is of rich quality for silver, but there will soon be considerably increased sales, which, with advanced prices for lead, will greatly augment their profits, and enable them to pay good dividends.

The present value of the reserves of silver-lead ore (exclusive of tribute pitches) is estimated at 1600 tons, which will soon be largely increased by the driving of the 110 fathom level about to be commenced. £25,600

Lead ore is still low in price. The lead sold from this mine has realised £22 per ton, and will no doubt do so again.

In October 50 tons of lead ore were sold, and Mr. Walter Eddy, M.E., states that there is no difficulty in returning 60 tons per month, which (at £16 per ton) would give for three months £2880 = £3130

Cost for three months £1500

Dues at 1-20th 150

Sundries (say) 100 ... 1750

Minimum profit per quarter £1380

Or for year in present state of mine £5,520

This would be about 20 per cent. taking shares even at £3 each, but they can be had under this price. The returns will be increased, and with a further rise in lead and copper—which will take place—much larger profits will be made. Dividends are expected to commence early next year. The driving of the 110 levels in a new course of ore will also give a further impetus to value, and greatly increase their sales.

The agent states, Oct. 18, 1879: "I estimate the reserves in the mine at 1600 tons lead ore. This at £16 per ton would realise an amount of £25,600. The mine never looked better than at present, and the future prospects are most encouraging. Our next sampling will be 50 tons silver-lead ore."

The 50 tons lead ore sold Oct. 31, 1879, to Sheldon, Bush, and Co., at £16 12s. 6d. per ton, realised £831 5s.

The shaft is down to required depth for 110 fathom level. The lode has improved to £28 per fathom.

In the 100 lode is improving, now worth 2 1/2 tons. In the winze below the 90 lode when last taken down was worth 1 1/2 ton per fathom.

### SHARP'S INVESTMENT CIRCULAR.

THE NOVEMBER EDITION (post free),  
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It is a Reliable "Guide," giving valuable information and Sound Advice, &c. It gives Market prices; Dividends upon outlay, when payable; Reports, &c., &c.

**HENRY GOULD SHARP, STOCK AND SHARE BROKER,**  
42, POULTRY, LONDON, E.C.—ESTABLISHED 1852.

BANKERS: LONDON AND WESTMINSTER, Lothbury, London, E.C.

### MR. E. J. BARTLETT, BRITISH AND FOREIGN STOCK

AND SHARE DEALER,  
No. 30, GREAT ST. HELEN'S, LONDON, E.C.

SPECIAL BUSINESS in EAST LOVELL and PEN-RY-ORSEDD. These shares should have a great rise.

"HOW TO INVEST," post free, One Shilling, Thirteenth Edition, enlarged.

### MR. JOHN RISLEY, STOCK AND SHARE BROKER,

38, CORNHILL, LONDON, E.C.  
ESTABLISHED 20 YEARS.

EAST CARADON, EAST CREBOR, and PARYS CORPORATION shares specially recommended.

Reliable information on all mines obtained for clients.



This day, crown 8vo., with numerous Wood Engravings, 12s. 6d., cloth (postage 7d.)

## A TREATISE ON METALLIFEROUS MINERALS AND MINING,

By D. C. DAVIES, F.G.S., Mining Engineer, &c.,

Author of "A Treatise on Slate and Slate Quarrying."

"This book is designed to describe, in a concise and systematic manner, the conditions under which metals and metallic ores are found in the different countries of the world. It is hoped that such a description will serve, first, to explain to some extent the origin of deposits of metalliferous minerals; and, secondly, by defining the zones occupied by the various metallic ores, to lessen somewhat the amount of unsuccessful search for them."—*Extract from Preface.*

CROSBY LOCKWOOD AND CO., 7, Stationers' Hall Court, London, E.C.

### Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES \*—No. CXXXVI.

By J. CLARK JEFFERSON, A.R.S.M., W.H.S.C.,

Mining Engineer, Wakefield.

(Formerly Student at the Royal Bergakademie, Clausthal.)

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#### METHODS OF WORKING WITHOUT ATTLE PACKING.

##### PILLAR WORKING.

The following examples refer to pillar workings, in which the general direction of the stalls and the advance of the working away of the pillars is in the direction of the strike, and hence called "strike pillar workings."

The workings at the Sulzbach Colliery, near Duttweiler, are opened out by means of a drift from the hill side. Where the drift intersects the seam (which is about 32 in. thick and inclined at 45°) a level is driven right and left in the seam. At a short distance to one side of the drift a pair of ends are driven up on the full rise of the coal. The smaller of these, 5 to 6 ft. in width, is arranged as a travelling road for the miners, and as air road; the larger, which is 4½ yards in width, is fitted up as a self-acting inclined plane. These two ends are thirled every 16½ yards, the thirlings being continued right and left of the endings as levels, which are carried forward to the end of the division, a length of 450 to 500 yards. At a distance of 11 yards on each side of the pair of ends these levels are gradually widened to 5½ yards in width, thus leaving pillars 11 yards in width between the levels or stalls. According to this arrangement one-third of the coal is got in stall work. When the stalls have reached the boundary the pillars are worked back towards the endings, beginning with the uppermost pillar, the working away of each pillar preceeding somewhat that of the pillar next below, so that with this arrangement the working faces of the pillars follow each other in a step-like arrangement. Ten stalls are usually set off on each side of the pair of ends, so that the self-acting inclined plane has usually a length of 160 yards, which is rarely exceeded. The pillar between the level from the drift and the first stall is usually left intact to protect the main level. When driving the stalls it will be found necessary to thirl the pillars every 50 to 60 yards for the sake of ventilation. As the working out of these divisions approaches completion other endings are started off from the main level at distances of 450 to 500 yards to the right and left of the first; or the first pair of ends are prolonged to the rise, to work out the coal lying to the rise of the first workings.

At the Prosper Colliery, near Essen, the following is the arrangement and mode of opening out the pillar workings, the inclination of the seams varying between 15° and 40°. From the main level jig-brows are started on the full rise at distances of 25 metres apart, and carried up the full thickness of the seam to the low side of the safety pillar left for the protection of the next main level above. When the first jig-brow has advanced a distance of 12½ metres, the first stall is set off parallel to the main level. As soon as the main level has advanced 25 metres from the first jig-brow a second jig-brow will be set off to the rise. When this second brow has advanced so far as to intersect (hole through to) the first stall, the first jig-brow will have advanced far enough to set off a second stall, 12½ metres to the rise of the first, or 25 metres to the rise of the main level. Since the stalls are generally driven double shift, whilst the jig-brows are driven single shift, the main level will have advanced so far that the third jig-brow can be started off at the same time the second stall is started. If this arrangement is followed out there will be as many stalls started off as jig-brows, and *vice versa*. Each time a jig-brow intersects a stall the brake is removed 12½ metres higher up the brow. As soon as the second jig-brow has reached the boundary of the division to the rise the working way of the top pillar between the first and second jig-brow is commenced. When the third jig-brow has reached the boundary to the rise side the first pillar will be worked out, and the working away of the top pillar between the second and third jig-brows is commenced, simultaneously with the working away of the second pillar from the top between the first and second jig-brows. When these two pillars are worked out the fourth jig-brow will have reached the boundary to the rise side, and the working away of the top pillar between third and fourth jig-brows, the second pillar between the second and third jig-brows, and the third pillar between the first and second jig-brows, are commenced simultaneously. The coal is sent down the jig-brows in small curves, out of which it is emptied into larger ones in the main level. All the jig-brows are arranged for the full corf to pull up the empty one. As each pillar is worked out, the brake is removed 12½ metres further down the incline.

The same method is said to be employed for working at the Victoria Mathias Colliery, near Essen, with the distinction that the jig-brows are driven closer together (12 metres apart), so that square pillars are thus formed, and the necessity of driving the stalls double shift is avoided. The inclination of the seam at this colliery is only 6°.

At the Dukensfield Colliery, where the inclination of the seam is considerable, a similar arrangement is or was used. The seam is opened out by a series of levels, or rather pairs of levels, driven 60 to 80 yards apart; these levels being connected by pairs of jig-brows driven on the full rise or dip of the seam at distances of 130 to 140 yards. The workings are thus arranged in large divisions, 60 to 80 yards in height by 130 to 140 yards in length. Within each of the divisions the coal is worked out in a similar manner to that we have described as practised at the Prosper Colliery, near Essen. At Dukensfield, however, the stalls are driven 8 yards apart, and the brows, which are driven on the full rise or dip, every 30 yards apart; and the driving of the whole of the stalls and brows in one compartment is finished before the working away of the pillars commences. The pairs of brows only are fitted up as the jig-brows, the coal being transported along the stalls to the jig-brows. According to the direction of the cleats of the coal the pillars are worked away in slices on the full dip of the seam, or of the whole width—8 yards—of the pillar is taken as the working face, which is worked backwards in the direction of the strike. The working away of the pillars follows in exactly the same order as described in the case of the Prosper Colliery.

Very similar to the above is the method of post and stall, practised in the North of England. The seams, as we have before mentioned, are comparatively flat, vary from 3 ft. to 6 ft. in thickness, with a very regular line of cleavage, of which, however, advantage is mostly taken in the case of hard coals, and the mines are liable to thrust and creep. The coal seam is reached by means of two shafts, one sunk somewhat to the dip of the other. Three main levels (two of which pass through the centre lines of the shafts) are driven in the seam on both sides of the shaft, so that, however, the centre level passes through the centre of the downcast or pulling shaft, and one of the others passes through or close to the centre of the upcast shaft. The middle level of these three serves as the main level for transport to the pit bottom, and also as the intake level, the other

two outside levels serve as main return air roads to the upcast shaft. At a suitable distance from the pit bottom a pair of endings, or brows, will be put up on the full rise of the seam; one of the brows will be driven from the centre level, and the other will only be set off from the main return air road to the rise side. Where the brow from the main centre level, which is the one fitted up as a jig-brow, crosses the main return air road an air crossing will have to be put in over the jig-brow, which forms the intake for that division, or pannel. A second or third pair of brows will be put up from the main centre, or intake level, and the main return air level, at distances from the first pair of brows dependant on the length of the pannels. The jig-brow of each pair of brows will form the intake, and an air crossing put in over it where it is crossed by the main return air level. At some convenient distance from the pit bottom a pair of down brows will be driven from the main levels to the dip side of the main levels. The brow, which is fitted up as an engine plane serves as an intake, and is crossed at its intersection with the low main return air level by an air crossing; the other brow is only started off from the low return air level. When these pair of down brows have advanced a sufficient distance (dependant on the height of the pannels) a pair of levels are started off to the right and left. At suitable distances along these levels pairs of brows are set off to the rise to open out pannels, one of each pair being fitted up as a jig-brow. The coal is transported along the pair of levels to the engine incline, forming one of the main pair of down brows. Should the dip boundary still be a considerable distance to the dip of this pair of levels, the main down brows are continued forward to the dip boundary, and a second or third pair of levels, as the case may require, are set off to the right and left, and pannels opened out of these to the rise by means of a pair of brows. An air crossing will be required for every pannel where the jig brow is crossed by the return air level. Similarly pannels are opened out to the rise of the levels by means of pairs of levels driven at suitable distances apart up a main pair of brows set off from the main levels. One of the main pair of brows is set up as a main jig-brow to serve all the levels to the rise of the main pair of levels, and the separate pannels are started off from these rise levels by means of pairs of brows put up from these rise levels. So far our description refers to the general division of the mine into pannels, and the main roadways for transport and circulation of the air. The opening out of each pannel for the formation of pillars is carried on in the following manner:—When the pair of brows have advanced from the levels a distance equal to the thickness of the safety pillars intended to be left for the protection of the levels, the first stall is set off to the right or left hand as the case may be. When the pannel is double sided the stall is set off on both sides of the pair of brows. The double sided arrangement has the advantage that the stalls and endings can be driven much sooner, and the pannel generally got ready for pillar working in a much shorter time. The double sided arrangement, however, carries with it the disadvantage that the ventilating current which ascends on one side of the pannel passes over the workings on the opposite side in a downward direction, and consequently if fire-damp is present in any quantity considerable difficulty will be met with in carrying away the gas from that side of the pannel in which the air course takes a downward direction. When the brows have advanced again by the distance equal to the proposed thickness of the pillars a second stall is set off to the right or left, or on both sides, as the pannel is right sided, left sided, or double sided. By the time that the second stall has been fairly started the first stall will have advanced a distance from the brow equal to the intended length of the pillars, when the first ending is set off on the full rise.

As the brows successively advance a distance equal to the thickness of the pillars successive stalls are started off; and similarly as the first stall advances by lengths equal to the lengths of the pillars fresh endings are started off to the rise. The stalls and endings are only driven so far as to leave a safety pillar of the desired thickness between the pannel in question and the adjacent pannels. The pair of brows, likewise, only advance as far as the under side of the safety pillar, on the low side of the next pair of levels to the rise. Each pannel is thus isolated from the rest of the mine by barriers of coal on all four sides, the barrier on the low side only being cut through by the pair of brows, by which alone access can be had from the pannel to the rest of the mine. The ventilating current, which enters up the jig-brow, is caused to traverse along the first stall by means of brattice sheets or doors placed in the jig-brow between the first and second stalls, and sheets placed at the bottom of all endings except the last one. Sometimes sheets are also placed at the opposite ends of the stalls to drive the current well up to the face. When the pannel is one-sided the return air current descends down the back brow. When the pannel is double-sided the return air current must descend down the opposite side of the pannel. Brattice-sheets are then usually placed at the top of the endings to carry the currents well on the face. The working away of the pillars is commenced after all the pillars have been formed, the working away usually commencing at the top corner on the opposite side to the brow. When the inclination of the seam is very slight the working away of the pillars can be commenced on the low side of the pannel.

#### GEOLOGICAL SOCIETY OF LONDON.

Nov. 5.—HENRY CLIFTON SORBY, F.R.S. (President), in the chair.

Henry Bruce Armstrong, Savile-row, was elected a Fellow of the Society.—Syed Ali, B.A., Hyderabad, Deccan, India; Wynne Edwin Baxter, High-street, Lewes; Arthur Robert Boyle, Engineers' Office, Lime-street Station, Liverpool; Rev. John Lowry Carrick, M.A., Spring Hill, Southampton; Prof. Edward Waller Claypole, Antioch College, Yellow Springs, Ohio; Rev. T. Downen, Newlands-terrace, Bootle, Liverpool; Rowland Gascoyne, Mexborough, near Rotherham; George M. Henty, Georgetown, Colorado; Henry Irwin Jenkinson, Keswick, Cumberland; John Marshall, F.R.A.S., Albion-place, Leeds; Josiah Martin, Three-Kings College, Auckland, New Zealand; Charles Maxted, Providence Cottage, Well-road, Hampstead; Edward Provis, M.A., Worcester-street, Bromsgrove; Thomas Wm. Rumble, the Cottage, East Hill, Wandsworth; Rev. John Reuben Taft, St. George's, Wolverhampton; Octavius Albert Shrubsole, Reading; Samuel Richard Smyth, Blenheim-terrace, Old Trafford, Manchester; William Neish Walter, Hillpark-terrace, Newport, Fife; and Joseph Pepper Wright, Sunnyside-terrace, Undercliff-lane, Bradford, Yorkshire, were proposed as Fellows of the Society.—Edmund Knowles Binns, Heavygate-road, Sheffield; and J. Dawson, Somerset-place, Bath, will be balloted for as Fellows of the Society.

The following communications were read:—  
1.—"On the probable Temperature of the Primordial Ocean of our Globe," by Robert Mallet, F.R.S., F.G.S.  
2.—"On the Fish Remains found in the Cannel Coal in the Middle Coal Measures of the West Riding of Yorkshire, with the description of some new Species," by James W. Davis, F.G.S., &c. The remains described by the author were from a bed of Cannel coal about 400 ft. above the base of the Middle coal measures, and were chiefly obtained from this bed at the Tingley Colliery.  
3.—"On the Skull of *Argillornis longipennis*, Owen," by Prof. R. Owen, C.B., F.R.S., F.G.S., &c.

The next meeting will be held on Wednesday, when the following communications will be read:—1. "Supplementary Note on the Ver-

tebrae of Ornithopsis, Seeley (=Eucamerotus, Hulke)," by J. W. Hulke, F.R.S., F.G.S.—2. "On the Concretionary Patches and Fragments of other Rocks sometimes contained in Granite," by John Arthur Phillips, F.G.S.—3. "Certain Geological facts witnessed in Natal and the Border Countries during nineteen years' residence," by Rev. G. Blencowe: communicated by the Rev. H. Griffith, F.G.S.

#### TECHNICAL EDUCATION IN CANADA.

Reference was made at the time of its inauguration to the establishment of the Technological Institute of Halifax, Nova Scotia, and to the good results to be anticipated from it; and it is gratifying to find from the second annual announcement and calendar, just issued, that these anticipations have been fully realised. The object of the Institute being to provide instruction specially useful to persons desirous of qualifying themselves for engaging either as workmen, foremen, managers, or proprietors in the various mechanical, agricultural, mining, and chemical industries; its classes have been made available to many to whom, owing to the expense and time involved, a full collegiate course was out of the question, even had it been equally well adapted to their requirements, and hence it is that during the first year of its existence the Technological Institute can boast no less than 127 members, of whom 90 are gentlemen and 27 ladies—a number which in a comparatively small colonial community must be considered highly encouraging.

The office bearers are acknowledged to be men in whose hands any such institution would succeed if energy and perseverance could secure success; the presidency and vice-presidency being held by Drs. Lawson and Somers respectively, whilst the more laborious and important office of secretary and treasurer is filled by the Rev. Dr. Honeyman. The faculty of instructors is undoubtedly a strong one, the president teaching Agricultural Chemistry and Botany, and the vice-president Zoology; Mr. Fraser, the Government Analyst, acting as Demonstrator in Industrial Chemistry; Messrs. H. S. Poole, F.G.S., John Rutherford, M.E., and Edwin Gilpin, M.E., F.G.S., are the lecturers in Mining and Assaying, and Dr. Honeyman is the lecturer in Geology, Palaeontology, and Mineralogy; whilst the chairs of English, German, French, Spanish, Physics, Mathematics, Drawing—free-hand, mechanical, and architectural, Mechanical Engineering, Civil Engineering, and Naval Architecture are equally satisfactorily filled. The fees are almost nominal, that for registration being \$1 per annum, and the class fees \$3 per course, with two exceptions, where \$4 per course is charged. The Institute has proved itself nearly self-supporting, the 12 months accounts having diminished the balance in the treasurer's hands by \$242, or about 9s., although only one donation of \$20 (4l.) has been received during the year. The present balance is about \$109. A glance at the class attendances shows that the students, both ladies and gentlemen, fully appreciate the advantages offered, and altogether the Institute appears to be in a promising and prosperous condition.

#### METALLIFEROUS MINERALS AND MINING.

Although we have now a pretty extensive mining and mineralogical literature in the English language the student has hitherto been at some disadvantage, especially if his means have been limited, in acquiring the necessary knowledge owing to the number and cost of the volumes which had to be referred to. To meet this case a carefully arranged treatise\* has been prepared by Mr. D. C. Davies, of Oswestry, in which an outline of the leading information upon the various branches of the subject which have been given by the various authors who have written upon them. He states that his object has been to describe in a concise and systematic manner the conditions under which metals and metallic ores are found in the different countries of the world. It is hoped that such a description will serve first, to explain to some extent the origin of deposits of metalliferous minerals, and secondly, by defining the zones occupied by the various metallic ores to lessen somewhat the amount of unsuccessful search for them. His endeavour has been to illustrate great principles by a sufficiency of representative details, and to refer the reader to sources where additional illustration, as well as the enumeration of the more minute details of mining may be found. The illustrations have been prepared by the author's son—Mr. E. Henry Davies—and certainly entitle him to the recognition of the services given in the preface.

In the chapter on the materials of which the earth is made Mr. Davies states that these materials, in their combination and varieties, amount to about 600 species, which, however, are resolvable to the 63 elements recognised by chemists, and of which he gives a list. He further gives a brief outline of the principles upon which minerals are distinguished from each other, and tabulates the strata in the order in which they lie upon each other, and of the names by which the different groups of them are known to geologists, according to their age, their fossil contents, or the locality in which they have been most studied. He mentions that with the exception of the metal iron, more rarely copper, and occasionally one of the noble metals, all the metallic minerals to be considered are found in the strata below the coal measures; the Laurentian, the Cambrian, the Silurian, the Devonian, and the Carboniferous being their great depositories. It follows, therefore, that it is only in those places where these great groups of strata are exposed on the surface of the earth we may expect to find metallic ores and mines. As a fact these groups of strata make up the great mountain chains of the world, the Laurentian or the Cambrian usually forming the central, or basement, mass of rock, and the newer groups reposing in their proper sequence on each side. This arrangement occurs with a remarkable uniformity all the world over. In the chapter on the classification of the deposits of metalliferous minerals he remarks that most fissures that are charged with metallic ores have a general east and west direction, which varies however, about 45° on either side.

With regard to the metallic contents of lodes, the nature of the strata traversed by lodes is found from long observation to determine to some extent the kind of metallic ore that predominates in the latter. Quartz lodes passing through granitic rocks, especially when pyrites is present, are the favourite resorts of gold. In North Wales the hard blue slates of the Llandeilo strata are favourable for the production of lead. Lead is also the prevailing metallic ore in limestone rocks, although there are occasional deposits of copper. Alternations of greenstone and porphyritic rocks with slates produce copper. Granite, especially the upper, coarse, and decomposed granite of Cornwall, is the prolific rock for tin. A lode, therefore, changes in the character of its contained metallic ore; as in Cornwall, a lode passing through bluish killas, or slaty rocks, contains copper, which gives place to tin when the granite is reached. In Shropshire, also, the lodes which are productive of lead ore in the bluish-grey slaty rocks of the Llandeilo series become poor in lead and richer in copper as they pass into the underlying grits of the Cambrian rocks of the Stiperstones and Longmynd. There are several chapters on the mode of occurrence of gold, silver, copper, tin, lead, zinc, and iron respectively, and in all these the utmost skill and judgment are secured in the selection.

At the thirty-second chapter Mr. Davies comes to the question of discovering and proving mines. He very truly remarks that a curious chapter might be written on the superstitious and magical means by which, in times past, it has been supposed that minerals might be discovered, including that belief in the magical power of the "divining rod," which even now lingers in the minds of men whom we would suppose should know better. Taking a more practical view than this Mr. Davies explains that the commercially valuable minerals, with few exceptions, are confined to the older strata of the earth, from the new red sandstone downwards. There is no mistaking the locality of these older rocks, they form the elevated and rugged portions of the globe, and they have all over the world a general course and direction ranging from north-east to south-west. The search for all metallic ores, except those of iron, is thus practically restricted geographically to hilly regions, and stratigraphically to the rocks lying below the coal measures. There are then three chapters on the working of metalliferous mines, and two on dressing

\* "A Treatise on Metalliferous Minerals and Mining." By D. C. DAVIES, F.G.S., M.E. London: Crosby Lockwood and Co., Stationers' Hall Court.



metallic ores, a chapter on hydraulic gold mining, one on sundry particulars of work and costs, and one on general considerations, in which the causes of unprofitable mining are well explained.

Although filling little more than 400 pages, Mr. Davies's volume is without question the most exhaustive and the most practically useful work we have seen; the amount of information given is enormous, and it is given concisely and intelligibly, so that neither the practical miner nor the general reader interested in mines can have a better book for his companion and his guide.

**THERMODYNAMICS—VAN NOSTRAND'S SCIENCE SERIES.**—The new volume of Thermodynamics by Dr. Henry T. Eddy, C.E., of the University of Cincinnati (New York: Van Nostrand. London: Trübner and Co., Ludgate Hill), is calculated to prove of considerable value to all students of the subject, not only from the amount of information actually contained, but from the facility which it will offer for the more thorough comprehension of the writings of Rankine, Zeuner, Pochet, and others, which to many have appeared excessively involved. There is no doubt much truth in Dr. Eddy's remark that the theory of thermodynamics as developed by Rankine in his Treatise on the Steam Engine is obscure to a degree, which has greatly interfered with the usefulness of that most valuable treatise, though when it is considered that it is the first treatise published in English founded on correct principles, the marvel is that it still holds its place as a standard work. The nature and the relative value of the principles laid down by the several authors are fully explained, and Dr. Eddy remarks that in 1853 Rankine, in his Manual of the Steam Engine, announced a general law of energy which seems to afford a better basis for the theory of thermodynamics than any other axiom or hypothesis heretofore proposed; but being apparently much absorbed in his molecular hypothesis he neglected sufficiently to enforce and explain this most valuable conception. As a consequence the more abstruse and less useful, though more fully explained, axioms of Clausius and of Thomson furnish the basis of every published treatment of the subject. Dr. Eddy, on the contrary, uses Rankine's ideas as the basis of reasoning, but adopts the analytic forms of such investigators as may appear convenient, among whom may be mentioned, besides Rankine, Clausius and Thomson, the more recent investigators Maxwell, Zeuner, Hirn, and Boltzmann. Dr. Eddy has certainly placed the matter in a more readily comprehended light than it has hitherto been, and he shows not only that compound engines are advantageous, but by explaining to what extent and for what reason they are thus advantageous, he affords to engineers the means of determining in what direction it is necessary for them to turn their attention in order to approach most nearly to perfection in the construction of engines of that class. The volume is a very useful one and will, doubtless, be extensively read.

#### THE MIDLAND INSTITUTE OF MINING, MECHANICAL, AND CIVIL ENGINEERS.

The monthly meeting of members was held at their rooms in Barnsley on Wednesday, the President in the chair. The principal business was the arranging of the evidence that should be given on behalf of the Institute before the Royal Commission on Accidents in Mines. In March last it was proposed that the machinery of the Institute should be put in motion with respect to the commission so as to afford what information it could. The commission had then commenced its investigation, and the only communication received by any member of the Institute was a letter from the secretary to Mr. T. W. Embleton, a former president, wishing him to attend on certain days and give some information. At that time Mr. Embleton was abroad, and he had not since heard anything more. A committee of gentlemen connected with the Institute was formed to take the matter in hand as engineers, and to publish extracts from their Transactions, and to open communication with the Royal Commission. At a meeting in August a resolution was proposed—"That the secretary be requested to write to the secretary of the Royal Commission, stating that if the Royal Commission considered it desirable the Institute will be glad to appear before it by some of its members for the purpose of giving evidence, and that the secretary be further instructed to call a meeting of the council when he gets a reply." At the meeting held in September last the Chairman remarked that they had no hesitation to take some credit for inaugurating the enquiry which had resulted in the appointment of the Royal Commission. About 12 months previously the members were led by Mr. Embleton into a careful investigation of the practical merits of the safety-lamp, especially with reference to some test of its complete security as against external gas before being put into the hands of the operative miner or other official of the pit. Simultaneously an agitation was aroused touching the Mines Regulation Act, 1872, and the alteration and revision of its clauses, in order to aggravate and intensify the obligations and penalties which should hereafter apply to owners and managers of mines.

Alarmed by the theories and propositions, remarked the President of the Institute at the meeting previously held, put forth in what were considered influential quarters, the engineering portion of the members combined for deliberation and action accordingly, and hence, after conferences and mutual explanations, the grave investigation now being prosecuted by and under the authority of Her Majesty and of Parliament. Considering that the commission began its enquiries in April last, and has since sat for the reception of evidence a number of times, it is worthy of remark that the Institute, through some of its members, has so far been reticent. The evidence of the Inspectors of Mines appears to have been taken as well as that of other officials, leaving to the further investigation of the commission the more minute details which go to establish the system of mining which harmonises best with safety and economy. Accordingly, it was stated that some most elaborate reports had been prepared of sudden outbursts of gas that had taken place in different parts of South Yorkshire, where they appear to have taken place more frequently than in any other part of the kingdom, showing that the safety of the men where they take place is only ensured by the best safety-lamps in the best possible condition. These difficulties are of a most trying character from the gas exuding violently alike from floor and roof, whilst in most other districts the gas, as a rule, escapes only from the mine. Information with regard to ventilation as found most successful in the most fiery district in the kingdom, has also been prepared, together with the improved system of testing safety-lamps, the mode of working coal, and blasting by explosive agents. In South Yorkshire it may be said, as a rule, that their workings were prosecuted at depths below the general level of the water-bearing strata, and to this circumstance in all probability may be attributed the more fertile production of gas than many other coal fields have any good grounds for complaining of.

It will be seen from the foregoing remarks that the Midland Institute will be able to give a valuable amount of information to the Royal Commission, such as could not be obtained from any other similar body in the kingdom.

**SILICATE COTTON.**—The utilisation of the scoria or refuse from blast-furnaces which is technically known as slag, has of late years received a good deal of attention, as the result of which this material, in itself unproductive, has by processes of conversion been applied to several industrial purposes upon a practical and commercial scale. One of the most important outcomes of blast-furnace slag is slag-wool, or silicate cotton as it is also called, from its resemblance to cotton wool. Silicate cotton is now generally recognised as among the most efficacious of all boiler and steam pipe coverings, but the main difficulty has been to apply it in such a form that the cotton should remain in a compact state without chance of shifting or escaping during repairs. After a series of experiments Messrs. Daniel H. Dade and Co., of London, have managed to overcome the difficulty stated, by applying the cotton, made into mattresses 2 and 3 in. thick, to boilers, rendering the shifting of the cotton impossible. For steam-pipes the silicate cotton cement is equally useful, but another and most successful method is to apply the cotton woven with flexible iron wire into long bands which can be twisted spirally round the pipe, an operation which requires little time and no great skilled assistance.

When fixed in its place a covering of canvas protects it from injury.—Mr. John Alexander, of Glasgow, writes—I have observed a notice of this article which is so far correct, but experiments have been made by other parties besides Messrs. Dade and Co., and which have proved equally successful. I can show anyone anxious to see it silicate cotton woven with wire on to canvas, and which is much superior for covering to the mattress plan. At the present moment experiments are being carried on to still further utilise the slag from blast-furnaces.

#### CAMBRIAN MINES—IMPORTANT CORRECTION.

In his overzealous efforts to demonstrate the excellent prospects of the copper trade in his communication, published in last week's *Mining Journal*, Mr. Ernest Hawkins, Sworn Metal Broker, makes a very damaging and curiously erroneous statement concerning the Cambrian Mines, declaring that—

As to the Cambrian Mines, "sufficient unto the day is the evil thereof," and not a single ton of copper from that source has been sold yet, nor are the following figures, showing the decrease of the production in England since 1857, likely to encourage your readers to "bull" the Cambrian shares." The Editor has no hesitation in expressing his regret that such a statement should have been published, more especially as Mr. Hawkins, from the necessary acquaintance with the metal trade, which the fact of his signing himself "Sworn Metal Broker" would indicate, cannot pretend ignorance of the sources of production, even apart from the circumstance that the Cambrian Mines copper ores are regularly sold at the Swansea public Ticketings, at which sales have been made:—

April 9.....	58 tons.....	22½ produce	
	28 ".....	5½ "	£1113 5 0
	14 ".....	2½ "	
	16 ".....	8½ "	
Sept. 23.....	50 ".....	17½ "	491 5 0
Oct. 14.....	28 ".....	18½ "	
	15 ".....	20½ "	549 13 6
	8 ".....	8 "	
Oct. 29.....	31 ".....	21½ "	
	40 ".....	14½ "	637 9 6
Nov. 4.....	31 ".....	17½ "	
	12 ".....	22½ "	592 1 0
	7 ".....	11½ "	

Total..... 338 tons..... £3403 14 0

No more complete contradiction of Mr. Hawkins's statement can be given than that furnished by these figures, which show not only that the mine sells copper at almost every Ticketing, but that the character of the ore sold is of so high a produce as not to have the appearance of being British ore at all; a 9 per cent. ore is usually considered very high, but it appears that at four out of five of these sales the Cambrian Mines have sold ore of over 20 per cent. produce—a fact which certainly justifies those interested in saying that they have the richest copper ore in the kingdom. The directors and the shareholders who have complained of Mr. Hawkins's statement are, however, entirely unjustified in adopting that gentleman's conclusion that because the production of copper in England has diminished, therefore a copper mine has diminished chances of success. The correct conclusion is just the reverse—the smaller the production the better prices will be obtained by the producer. The Cambrian Mines have sold nearly 35000 tons worth in about six months, and are now delivering a further 50 tons of copper, showing an amount of prosperity which no unsupported adverse statement could interfere with.

#### THE COPPER TRADE.

Messrs. VIVIAN, YOUNGER, and BOND (Nov. 7) write—Early in the month Chili bars advanced from 61½ to 65½, and, after a few days inaction, with a relapse to 63½, the market again advanced to 65½, and up to 68½, 10s. was paid with prompt. The advice of charters for three weeks ending the 18th ult. at Valparaiso, equal to 2100 tons fine, stimulated speculation, until 68½, 10s. was paid three months prompt. At a slight reduction from the extreme rates the trade continued making considerable purchases, chiefly of English raw copper, and the smelters bought largely of furnace material throughout, thus reducing the available supplies of this description, both at Liverpool and Swansea, to an unusually low point. It is a fact worthy of attention that, notwithstanding the pretty considerable rise in the value of Chili bar copper, the quantity of spot stuff offering has been comparatively small, and there are no indications that any of the old holdings outside "Edwards" stock, of which moderate sales have been made, have been placed on the market. It may be that consumers have been in the habit of keeping their reserves of copper to a considerable extent in Chili bars in warehouse. Should this be so, the exceedingly small quantity of material outside of Chili bars, either here or on the way, gives additional interest to the situation, as if there is any trade to speak of it would seem we must be very close to the time when such reserves—if they exist, must be largely trampled upon. The sales of furnace material have been as follows, by public ticketing at Swansea:—On Oct. 14, 1517 tons British and foreign ore, average produce 9½ per cent., average price 12s. 2½d. per unit; on Nov. 4, 1728 tons British and foreign ore, average produce 8½ per cent., average price 12s. 6d. per unit. According to the Board of Trade Returns for the United Kingdom, the imports and exports of copper during the first nine months of the following years, estimated in fine, were as follows:—

	1879.	1878.	1877.
Imports.			
Copper in ores and pyrites.....Tons	19,457	22,991	26,391
Regulus.....	16,547	12,557	12,913
Bars, &c.....	34,708	30,632	30,520
Total.....	70,712	66,240	69,824
Exports.			
Manufactured copper, &c.....	21,602	18,677	18,687
Unmanufactured do.....	12,372	14,198	7,787
Foreign do.....	13,006	9,440	10,631
Total.....	46,980	42,315	37,105

Messrs. RICKARDS and BUDD (Nov. 11) write:—The condition of our market is satisfactory. Deliveries out of stock were very large last month, and are going on fairly, so far, in the present one. America is taking some copper (25,000 lbs. weekly) in consequence of the excessive quantity of Lake Superior (6000 tons) sent by her to Europe this year, she now needs to make up some of it back again. Australia, also, is exporting less. Altogether, we think the rise thus far established is likely to be permanent, and in the event of any favourable symptom appearing, such as a good demand for India—expected by some as soon as that country's cereals are ready for shipment—there is every prospect of higher rates being current. The Board of Trade Returns show a large increase of exports this year over the two previous ones, while imports are only slightly in excess of those years.

	1877.	1878.	1879.
Exports—First 10 months.			
English copper—wrought and unwrought.....Tons	18,265	25,522	27,540
Foreign copper—unwrought.....	11,687	10,885	15,406
Yellow metal.....	14,401	12,647	14,233
Total.....	44,353	49,054	57,179
Imports—First 10 months.			
Copper in ores.....	12,353	11,322	9,820
Copper regulus and precipitate.....	15,468	17,036	22,203
Bars, cake, and ingots.....	34,382	34,731	38,931
In pyrites, estimated.....	14,857	12,286	10,046
Total.....	77,060	75,375	81,000
Total stocks in Europe and afloat, Nov. 1.....	42,200	51,500	55,600

#### THE TIN TRADE.

Messrs. VIVIAN, YOUNGER, and BOND write:—The movements in tin have been rapid and extreme during the past month. Foreign rose from 75s. to 81s., and again to 85s. during the first week. A relapse to 81s. 6d. preceded a bound to 91s., caused by the purchase on American account of the whole of the Billiton sale of Oct. 13 (13,000 piculs), at a price equal to about 83½ per ton in Holland; 96s. 6d. was the crowning point, and though sales were made at one point down to 87s. in the realisation of some old stock, the announcement of the large deliveries, as below, caused a sudden recovery to 96s. Further realisations have caused some relapse, but at the close the market is steadier at 92s. 6d. to 93s. The general statistics show a large improvement, and with the increased requirement of the tin-plate makers, who are now using much larger quantities, and also with the American demand diverting our usual supplies from the Straits and also from Australia, it will not be surprising if the figures show still more favourably during the next two months. The deliveries of foreign tin from warehouse in London and Holland were 2810 tons. The October shipments from Australia are estimated at about 800 tons. From the Straits nothing was shipped, America having taken all the available supply. The stock of foreign tin in London and Holland is thus estimated:—

	1879.	1878.	1877.
Foreign tin in London.....Tons	9,530	9,339	9,288
Banca tin in Holland.....	1,297	1,240	968
Do. (in Company's hands).....	1,421	1,112	908
Billiton tin in Holland.....	2,089	1,674	1,280
Total.....	13,337	13,365	12,444
Quantity of tin afloat for Europe.....	2,900	3,800	2,500

Messrs. RICKARDS and BUDD write:—Deliveries were very big last month, and statistics accordingly show a great improvement. The extensive purchases made on American account have led considerably both on 92s. and prices. It is a question whether much more can possibly be wanted for the same

quarter, and prices have already had a large rise. The delivery of foreign out of warehouse, London and Holland, is:—Jan. 1 to Oct. 31, 15,249 tons, against 15,845 tons in 1878, and 14,802 tons in 1877. The stock of tin here and in Holland (omitting Banca in Dutch Trading Company's hands, is:—Oct. 31, 12,107 tons, against 12,620 tons Oct. 31, 1878, and 12,077 tons Oct. 31, 1877.

	1879.	1878.	1877.
Shipments of Straits to England, Jan. 1 to Oct. 31.....Tons	2,855	2,740	2,740
Australian.....	5,756	7,315	7,315
Total.....	8,611	10,055	10,055
The quantity of tin exported from the United Kingdom, Jan. 1 to Oct. 31, as shown by Board of Trade Returns, was:—			
English.....Tons	5,132	5,335	5,335
Foreign.....	6,456	5,789	3,069
Total.....	11,588	11,124	8,404

**PRODUCTION OF COAL IN FRANCE.**—The rapidity with which the consumption of coal has increased in France during the last 30 years or so is shown by a paper recently read by M. Wullemmin, director of the collieries at Aniche, in which he gives the following statistics:—

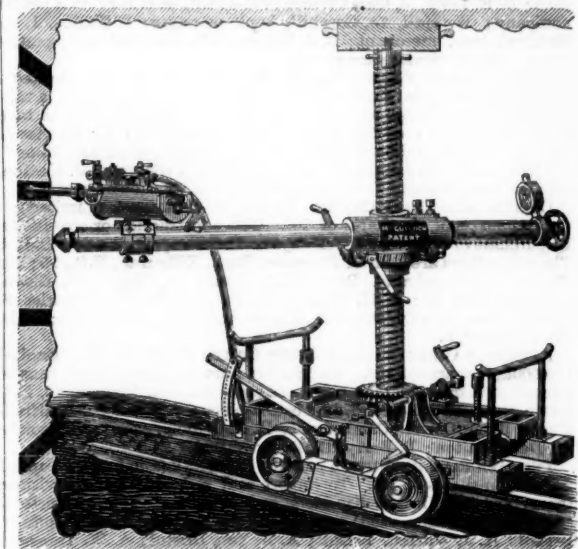
	Production.	Imports.	Total consumption.
1850.....Tons	4,433,567	2,791,700	7,225,267
1860.....	8,309,622	5,960,630	14,270,252
1870.....	13,179,780	5,650,250	18,830,030
1875.....	17,046,890	5,610,640	22,657,530
1877.....	16,877,200	7,267,300	24,144,500

The inferiority of the French miners to English colliers is shown by the fact that the average output of a miner in the department of Nord or Pas de Calais is only 152 tons per annum, while that of a Durham collier is 333 tons, or more than double; also that the cost per ton of coal put on the rail is nearly 9s., while in Durham it does not exceed 5s.

**QUICKSILVER.**—During the past three years five counties in California have produced an aggregate of 168,582 flasks; a flask contains 764 lbs. qu-cksilver.

#### NEW ROCK-DRILL CARRIAGE

There can be no doubt that the amount and quality of the work done with rock-drills depends to a very large extent upon the manner in which they are fixed and kept to their work, a comparatively small amount of vibration causing a material diminution in the depth of the hole bored in a given time. To ensure the largest possible amount of work being done by the drill Mr. James McCulloch, engineer, of Manchester, has invented an apparatus or carriage to be used for supporting or carrying rock-drilling machines for mining, tunnelling, and similar operations, and is designed to provide an apparatus which will be of great strength, simple in construction and operation, and which will, moreover, afford means whereby the drilling machine may be very quickly and easily adjusted to different positions. By employing an apparatus constructed according to his invention one attendant is enabled to set the machine to work in any desired position and at any angle without loss of time, and with slight exertion. A drilling machine mounted upon this carriage or apparatus may be readily adjusted to the varying height and width of the headings; also to a position for drilling holes at any part and at any angle of the face of the same without removing the carriage from the position in which it is fixed at the commencement of the operations.



The whole apparatus is thoroughly solid and substantial, and appears likely to prove very durable, notwithstanding the extremely rough usage to which machines of this class are subjected. In carrying the invention into practice he employs an ordinary bogie or truck, which may be on wheels or otherwise; upon this truck he provides a bed-plate, upon which is mounted a vertical tubular bar, which has a screw thread formed upon it. This vertical bar is so arranged that it may be raised and lowered by a screw nut whose outer periphery forms a worm wheel. With this worm wheel is geared a worm fixed upon a horizontal shaft, which may be operated by a crank handle outside the frame of the truck. By this arrangement the vertical bar can be tightened up against the roof to any pressure as may be required, leaving the apparatus in a thorough solid position. Upon the vertical bar he provides a double universal clamp or cross head, which serves to support a horizontal tubular rack bar. This part of the apparatus is arranged to be raised and lowered by means of another screw nut, whose exterior periphery forms a worm wheel, and is geared with a worm fixed on a shaft supported in bearings on the clamp. The rack bar is caused to travel in an horizontal direction by a toothed pinion, which engages with the teeth on the bar, and is operated by a crank or handle at the side of the cross head. The horizontal bar is also moved in a circular direction by means of the clamp or cross head. This rack bar is tubular, and encloses a shaft screwed at one end, its screwed part working into a pivot or end piece for adjusting the bar when in a working position. At one end of the shaft there is a self-acting weight, which acts upon the pivot when it is required. By this arrangement the horizontal bar is kept in a constant rigid position while the drill is at work, and at the same time it does not alter the position of the drill from the line of the hole just started. The drilling machine may be mounted upon the horizontal bar, or if required on the vertical bar. It will be readily seen that a rock-drilling machine placed upon an apparatus constructed as above described may be adjusted to any required position or angle without moving the truck whereon the said apparatus is mounted.

The advantages of the new drill carriage will be obvious to all who have been in the habit of using rock drills—a sure foundation is secured for the drill; the adjustment over the whole face of the work is very easy, and a hole can be put in at any angle, so that a less number of holes need be bored (it is well known in blasting that one hole in the right place is worth two in the wrong), saving the explosive. The carriage will run the drill from its position during blasting, and return it again to its work. Its strength and stability place it out of the range of accident, and prevent needless loss of time and stoppage. Notwithstanding its weight the mechanical arrangements allow of all the parts being freely moved. Carriages are now being extensively used in ironstone mines, tunnels, and headings. As Mr. McCulloch has been for many years intimately connected with the application and use of rock drills, he was well acquainted with the exact requirements of the case, and the greatest obstacle he has found in getting people to adopt rock-drilling machinery was to give them speed with economy, which has led him to bring out this carriage, and by its appliance in mining and tunnelling he has been able to do so. He knows several instances where drills have failed from want of such an apparatus. It does not matter how quick a



drill may penetrate the rock (and he thinks there is very little difference in the speed of any of the drills now out), the chief point is to get the drill quick at its work and away again, or what is gained in a machine drilling a hole quick is soon lost again in fixing. Several of the machines are at work, and have given great satisfaction.

### Registration of New Companies.

The following joint-stock companies have been duly registered:—

**THE LONDON AGENCY (Limited).**—Capital 5000*l.*, in shares of 5*l.* To apply to Parliament and the Board of Trade from time to time for concessions, grants, &c., for the construction of public and other works. The subscribers (who take one share each) are—C. W. Kirk, 148, St. Paul's-road; E. Leworthy, 13, Finchley-road; E. T. Henman, 15, Manor-road; E. T. Henman, jun., 169, Shoreditch; G. Fraser, 9, King's Arms-yard; W. W. Temple, Lewisham; H. Fleet, South Hackney.

**SOUTH-WESTERN LOAN AND DISCOUNT COMPANY (Limited).**—Capital 20,000*l.*, in shares of 5*l.* To purchase or otherwise acquire the goodwill, assets, &c., of the South-Western Loan and Discount Company, and to carry on such business. The subscribers (who take one share each) are—C. King, 136, Blackfriars-road; C. A. May, 217, Grove-road; S. Joseph, 40, Sutherland-square; J. Monaghan, 10, Park-street; S. Britton, jun., 19, Lambeth-road; J. G. Messer, Webster-street; C. J. Redford, 96, London-road.

**KOPP'S EXTRACT OF MEAT COMPANY (Limited).**—Capital 100,000*l.*, in shares of 10*l.* To carry on in the United Kingdom and elsewhere the manufacture and sale of this extract, and to buy and sell cattle, poultry, game, fish, &c. The subscribers are—General E. K. Money, 16, Charles-street, 25; Lieut.-Colonel W. W. Knollys, 102, Belgrave-road, 25; Capt. E. M. Cooksley, Burgess Hill, 25; Admiral J. H. Selwyn, 16, Gloucester-crescent, 1; J. R. Pearson, 8, Northumberland-Alley, 25; F. R. Nurthen, 390, Strand, 1; G. Sharpe, 428, Strand, 1.

**GRAND HOTEL, EASTBOURNE, COMPANY (Limited).**—Capital 65,000*l.*, in shares of 10*l.* To purchase the freehold, fixtures, property, effects, and goodwill of the Grand Hotel, and continue the business. The subscribers are—Admiral F. Max, Wimbledon, 50; G. Mundie, Eastbourne, 50; A. Barron, Stamford Hill, 50; C. A. Venn, 57½, Coleman-street, 5; G. P. Morton, Strawberry Hill, 1; H. T. Feast, 10, Old Jury Chambers, 1; E. H. Hale, 16, Cullum-street, 1.

**THE NEWFOUNDLAND MINERAL COMPANY (Limited).**—Capital 60,000*l.*, in shares of 5*l.* To purchase or otherwise acquire certain mining licenses, grants, and leases for searching for and exploiting minerals, situate at Robert's Arm and Conception Bay, Newfoundland, now standing in the names of F. Ellerhausen, A. Guzman, and J. Evans-Freke Aylmer. To purchase any other lands, mines, collieries, minerals, works, concessions, licenses, grants, &c. To work any mines and quarries, ores, coal, and other minerals which may be at any time acquired by the company. To erect, build, acquire pit, and work all smelting and other works, manufactories, and buildings that may be found necessary. The subscribers (who take one share each) are—F. Ellerhausen, Nova Scotia, mineowner; H. Have-man, Paris, merchant; J. Evans-Freke Aylmer, 27, Walbrook, gentleman; C. E. Long, 6, Great Winchester-street, secretary to a public company; W. Hall, 75, Cornhill, bank manager; P. Thaine, 1, St Swithin's-lane, merchant; E. J. Thomson, 5, Portland-road, gentleman. (No particulars are given.)

**CHICAGO AND GRAND TRUNK RAILWAY COMPANY (Limited).**—Capital 1000*l.*, in shares of 10*l.* To make and maintain a railroad between Chicago and Port Huron. The subscribers (who take one share each) are—Sir H. W. Tyler, Edmonton; Sir Charles L. Young, Bart., 5, Ashburn-place; W. N. Heygate, M.P., Loughboro'; W. Newmarsh, 67, Lombard-street; R. Young, Glasgow; J. Keaton, 21, Old Broad-street; Lord Claude Hamilton, 23, Lowndes-square.

**COCHIN AND TRAVANCORE RAILWAY COMPANY (Limited).**—Capital 550,000*l.*, in shares of 10*l.* The construction or acquisition by purchase or otherwise of railways and tramways in the East Indies. The subscribers are—Sir J. Ferguson, Bart., Kilkerran, N.B., 25; Sir William Cunningham, Bart., M.P., Glenmoor, 25; R. B. Elwin, Oriental Club, 25; J. H. Blair, Arthur's Club, 25; Sir Charles S. Young, Bart., 5, Ashburn-place, 25; B. Anderson, Dalkey, 25; A. D. Best, Madras, 5.

**PATENT SAFETY SALOON BOAT COMPANY (Limited).**—Capital 100,000*l.*, in shares of 10*l.* The construction and sale of such vessels. The subscribers (who take one share each) are—R. Dongan, 22, Fullerton-road; M. J. Almond, 19, Portsea-place; P. Wohack, 27, Alfred-place; W. McDowell, Camberwell; H. G. Gribble, near Wandsworth; W. Delf, Walton; P. Barry, 11, Bridge-street.

**THE GENERAL PRODUCE TRADING COMPANY (Limited).**—Capital 20,000*l.*, in shares of 10*l.* To import and sell American provisions throughout the United Kingdom and elsewhere. The subscribers (who take one share each) are—J. G. Trenerry, Bristol; C. Goodwin, Bristol; H. J. Warren, Bristol; A. B. Yeo, Bristol; A. W. Trenerry, Bristol; J. G. Trenerry, Bristol; J. Wasbrough, Bristol.

**LONDON AND SUBURBAN LICENSED VICTUALLERS MINERAL AND AERATED WATERS MANUFACTURING COMPANY (Limited).**—Capital 5000*l.*, in shares of 5*l.* To purchase the business of W. G. Middleton at Turnham Green, and to carry it on. The subscribers are—W. W. Grey, Hammersmith, 5; R. J. Hunter, 326, Oxford-street, 1; E. C. Middleton, Hammersmith, 1; S. Lynch, 1, Hare-court, 5; F. Jeffrey, 46, King-street, 5; T. J. Coombs, Whitechapel, 2; A. Middleton, Hammersmith, 5.

**CO-OPERATIVE METROPOLITAN LAUNDRIES (Limited).**—Capital 15,000*l.*, in shares of 10*l.* To erect steam laundry works and carry on the business of a laundry. The subscribers (who take one share each) are—W. Jones, Camberwell; J. Sealy, 1, New-street; A. Soares, 54½, Bishopsgate-street; W. Hird, 16, Hoxbury-street; Baron de Wolfer, 337, Albany-road; F. W. Beaumont, 25, Gower-street; W. Phillips, 54½, Bishopsgate-street.

**THE MOSCOW METROPOLITAN GAS COMPANY (Limited).**—Capital 550,000*l.*, in shares of 20*l.* To carry out an agreement for lighting Moscow with gas. The subscribers (who take one share each) are—W. A. Michael, 12, Tokenhouse-yard; J. Flemming, 12, Tokenhouse-yard; P. du Pre Gunfen, Bartholomew House; G. L. M. Gibbs, 15, Bishopsgate-street; Baron R. A. Heath, 31, Old Jewry; H. C. H. Breuer, 31, Lombard-street; G. M. Clements, 17, Gresham House.

**THE INTERNATIONAL CHEQUE BANK (Limited).**—Capital 200,000*l.*, in shares of 20*l.* To carry on the business of bankers both in London and Paris in all its branches. The subscribers (who take one share each) are—P. A. Hodgson, 4, Broad Sanctuary; A. Maily, 22, Bedford-row; W. Eykelbroch, 9, Bridgewater Square; C. von Berg, Upper Norwood; J. R. Rowland, Stoke Newington; G. Excell, Islington; L. F. Semonier, 5, Cross-street.

**THE IRWELL INDIA-RUBBER AND GUTTA PERCHA WORKS COMPANY (Limited).**—Capital 50,000*l.*, in shares of 5*l.* To purchase and carry on the business of the Irwell India-Rubber Works, situate at Salford. The subscribers (who take one share each) are—A. R. Robinson, Ealing; C. T. Henwood, Rochester; F. G. Henwood, 161, Highbury New Park; R. H. Harper, Tooting; J. Henderson, Croydon; J. W. Thomas, 4, George-street; W. Martineau, 6, Great Winchester-street.

**LEGAL, MEDICAL, AND GENERAL STORES (Limited).**—Capital 100,000*l.*, in shares of 2*l.* To carry on the business of general dealers for supplying shareholders and others with articles of domestic consumption. The subscribers (who take one share each) are—J. Look, Arkley; C. T. Pearson, Arkley; T. Hunter, Brixton; R. Libby, 12, Union-court; F. H. Benoch, 43, Moorgate-street; J. Hicks, West Kensington; R. Ward, 3, Bishopsgate-street.

**THE SECURE INVESTMENT ASSOCIATION (Limited).**—Capital 60,000*l.*, in shares of 20*l.* To acquire lands, buildings, &c., and to sell, let, lease, or exchange same. The subscribers (who take two shares each) are—J. B. Wild, 34, Ludgate Hill; W. F. D. Lang, Instow; R. F. Taylor, Thames Ditton; H. H. Green, Ealing Common; E. C. Harvie, 6, New Broad-street; C. A. Lang, 5, King-street; A. Peebles, 3, Salters Hall Court; W. E. Turner, Hackney.

**THE RIO GRANDE DO SUL (BRAZIL) GOLD MINING COMPANY (Limited).**—Capital 200,000*l.*, in shares of 5*l.* (preferred and deferred). To acquire from J. C. Backheuser, A. D. C. Faris, and H. D. S.

Souza liberal concessions, gold mines and reduction works, land, buildings, plant, and other property in the province of Rio Grande do Sul, Brazil, according to an agreement entered into by them and H. Bankart as trustee for the company (particulars of purchase not given). The selling, letting, and carrying on of the several branches of the business of a mining and reduction company, and such other works, operations, and business as may be deemed advisable in the interest of the company. The subscribers (who take 50 shares each)

are—L. Marshall, 65, Linden Gardens, captain 20th Regiment; B. D. Kershaw, 51, Chetwynd-road, C.E.; J. Bergtheil, 38, Warwick-road, merchant; J. P. G. Smith, Liverpool, merchant; F. Baker, West Hackney, contractor; T. Bush, Farningham, gentleman; W. Martineau, 6, Great Winchester-street, C.E. Number of directors to be appointed by shareholders) not to exceed seven, or be less than three. Qualification is fixed at 50 shares, and the commencing remuneration of the board 1000*l.* per annum.

## THE Mortgage & Agency Company of Ceylon (LIMITED).

Incorporated under the Companies Acts, 1862 and 1867, with Limited Liability.

Capital £1,000,000 (with power to increase), in 100,000 Shares of £10 each.

First Issue £500,000, in 50,000 Shares of £10 each.

A Deposit of 10*s.* per Share on Application, a Payment of 10*s.* per Share on Allotment, a Further Payment of £1 per Share at Three Months from the Date of the Allotment, and, if required, a further payment of £1 per Share at Six Months from the Date of the Allotment.

It is Intended to Make no Call beyond the above £3 per Share, as Debentures will be issued against the Uncalled Capital. In the event of no Allotment taking place the Deposits will be Returned in Full.

### TRUSTEES.

M. H. CHAYTOR, Esq., Chairman of the National Discount Company, and of the Alliance Bank.  
WILLIAM HOWLEY PALMER, Esq. (Messrs. Dent, Palmer, and Co.), late Governor of the Bank of England.  
WILLIAM JAMES THOMPSON, Esq., Director of the National Discount Company and Phoenix Fire Insurance Company.

### DIRECTORS.

D. A. CHAYTOR, Esq. (Messrs. Chaytor and Webster), 155, Fenchurch-street.  
H. A. EVATT, Esq., late Public Works Department and Member of the Legislative Council, Ceylon.  
H. D. H. FERGUSON, Esq., late of the Bengal Civil Service, and Member of the Bengal Legislative Council.  
T. J. REEVES, Esq. (Messrs. Dent, Palmer, and Co.), London.  
Colonel E. W. SCOVELL, St. Audries, Beckenham.  
EDWARD WEBB, Esq., late of Shanghai, Merchant.

### COLONIAL DIRECTORS.

The Hon. R. BEAUCHAMP DOWNALL, Member of the Legislative Council of Ceylon.  
GEORGE MACGREGOR, Esq., of Messrs. MacGregor and Co., Colombo, Ceylon.  
JOHN LOWDEN SHAND, Esq., Chairman Planters' Association, Ceylon.  
RALPH TATHAM, Esq., of Messrs. H. S. Saunders and Co., Colombo, Ceylon.

### COUNSEL AT CEYLON.

The Hon. CHARLES L. FERDINANDS, Queen's Advocate, Colombo.

### BANKERS.

THE ALLIANCE BANK (Limited), Bartholomew-lane, E.C.  
UNION BANK OF SCOTLAND, Edinburgh, Glasgow, and branches.

### PRODUCE BROKERS.

Messrs. W. J. and H. THOMPSON, 38, Mincing-lane.

### AUDITORS.

Messrs. HARDING, WHINNEY, and CO., 8, Old Jewry, E.C.

### SOLICITORS.

Messrs. STEPHENS, LANGDALE, and TURNER, 30, Bedford-row, London.

### SECRETARY.

W. M. LEAKE, Esq., late Member of the Legislative Council, and Chairman Planters' Association, Ceylon.

### TEMPORARY OFFICES.

CITY CHAMBERS, RAILWAY PLACE, FENCHURCH STREET, E.C.

### PROSPECTUS.

The financial pressure which has of late so generally existed in the East, and the expressed intention of the Banks in Ceylon to refrain from making advances on property, or against growing crops, and to restrict their business to pure banking operations, has thrown open a wide field for the safe and profitable employment of capital, which it is proposed to occupy by a company, to be called the Mortgage and Agency Company of Ceylon (Limited), based upon the creation of an ordinary share capital, and the raising of money by the issue of debentures. Its object will be to extend to Ceylon facilities similar to those extensively enjoyed by other colonies of the Empire, which have afforded safe and remunerative investments to English capitalists.

The operations of the company will embrace—

- 1.—Loans on mortgage of land.
- 2.—Advances on produce and growing crops.
- 3.—Sale of produce consigned to market.

It is proposed in the first instance to confine the operations to mortgages only. The company find that advantageous arrangements can be made with mercantile houses in London to advance the necessary expenditure for the cultivation and maintenance of the properties on which the company have mortgages. Messrs. Dent, Palmer, and Co. have offered to entertain the agency until the company decide upon their future arrangements in this respect.

All loans made by the company will be carried out in sterling money, thus avoiding the liability to loss arising from fluctuations in the value of the rupee, and they will in each case be limited to such amounts as the judgment and experience of prudent valuers may advise, and will be subject to the approval of the London Board. It is not proposed nor intended that the company shall in any case become the purchaser of lands, or produce, nor has it entered into engagements for the investment of any portion of its capital.

Lands in Ceylon occupied by Europeans are held under Government title, and all transfers and mortgages of them are subject to compulsory registration. When loans are made by the company the securities will be taken in the names of the trustees, and, with the uncalled capital, will constitute the security for the debentures.

The rate of interest obtainable in Ceylon on primary mortgage bonds is higher than in England, ruling ordinarily about 8 per cent. per annum, and upon the security of these bonds and its uncalled capital the company propose to raise money upon its debentures at remunerative rates. The profits on this margin, added to the interest upon the called up capital, should yield satisfactory returns upon their investments to the shareholders.

The following table, compiled from the "Investor's Monthly Manual" for September, 1875, shows the dividends paid by existing companies of a similar nature:—

Name of company.	When established.	Capital subscribed.	Paid up.	Amount paid up on shares.	Present price.	Last dividend paid.	Reserve and balance after last dividend.
Australian Mortgage Land Company	1863	1,500,000	300,000	£ s. d.	£ s. d.	p. c.	£
Credit Foncier of Mauritius	1864	600,000	120,000	10 0 0	13 15 0	12½	44,733
Mauritius Land Credit and Agency	1863	300,000	60,000	2 0 0	4 2 6	15	24,500
New Zealand Loan and Mercantile Agency	1865	3,000,000	234,320	2 10 0	4 0 10	10	163,824
Scottish Australian Investment Company	1840	500,000	500,000	100 0 0	185 0 10	10	70,244
Trust and Agency of Australasia	1861	500,000	212,000	1 0 0	2 5 0	20	50,644
Agricultural Company of Mauritius (Lim.)	1874	200,000	20,000	1 0 0	2 5 0	20	20,760

**BESSEMER STEEL FROM PHOSPHORETIC PIG-IRON.**—When pig-iron is blown in the Bessemer converter with a silicious lining, in the manner now practised, as is well known, the blow is stopped and the converter is turned down to add the spiegel when or almost immediately after the flame drops, which happens almost concurrently with the disappearance of the so-called carbon lines from the spectrum. If this is not done the metal is greatly wasted, and much importance is attached to not overblowing the metal except in some instances of a very silicious pig, when the blow is occasionally continued for some 40 seconds, while even if the metal is overblown even for many minutes the phosphorus is not removed. By the improved process invented by Mr. S. G. THOMAS, of Battersea, a converter lined with a calcareous or magnesian material, by preference magnesian lime bricks is used. He also produces a highly basic calcareous slag, which contains over 45 per cent. of lime and magnesia together; by adding to the contents of the converter bases equal in weight to from 4 to 6 times the weight of the silicon and phosphorus contained in the pig or metal treated. The bases added must consist of lime or lime mixed with a little iron ore, with sometimes (though it is not often necessary) the addition of a little common salt. He prefers to add a great part of the lime in very fine powder, which may be readily introduced by degrees, from an iron hopper or cylinder with a strong air-tight cover or valve into the blast pipe through a stop-cock and so by the tuyeres into the bath of molten metal (as has been before proposed for blowing in charcoal dust, &c.) This blowing in of lime-dust should continue throughout

The increasing prosperity of Ceylon, and the development of its wealth of late years, is shown by the rapid and accelerated increase of the colonial revenue:—

In 1860 the revenue amounted to.....	£
1870 .. .. .	1,091,606
1875 .. .. .	1,444,134
1876 .. .. .	1,467,613
1877 .. .. .	1,702,819
1878 .. .. .	1,646,209

The excess of revenue in 1877 was caused by sales of land beyond precedent, and by the results of the pearl fishery.

Coffee is, and has been for 40 years past, the staple production of the island, and the prices ruling for it in the markets of the world having been for some years firmly established, an enduring impetus has been given to its production, and the area under cultivation has been constantly and rapidly increasing with the increased demand. Large tracts of new land have been recently planted; the reserve forest lands still in the hands of Government are extensive, and will no doubt readily find purchasers, seeing that coffee planting has proved remunerative even at lower rates than those now current in the markets. With good management the planters have been prosperous despite the fact that many commenced with small capital, and were, consequently, subject to the payment of high rates of interest upon advances.

In addition to the staple of coffee, new industries have been opened up of late years by the cultivation of cinchona, tea, and cocoa, which, while affording opportunities for the employment of additional capital, have strengthened the prevailing belief that the prosperity of the island has been permanently ensured.

That the Home and Colonial Governments share in this belief is placed beyond doubt by the sanction just granted, after full inquiry, for the extension of the Government railway for some 50 miles into the heart of the new coffee districts. This will be the means of considerable saving to the planters in transport, and it is to be hoped will be as remunerative to the Government as the present line, which has been paying over 10 per cent. on the outlay.

The only contract entered into is one between E. C. Maddison and W. M. Leake, as trustee on behalf of the company, dated 10th November, 1879, with reference to the preliminary expenses.

Copies of the Articles of Association and of the above-mentioned contract may be seen at the offices of the solicitors in London, and prospectuses and forms of application can be obtained from the bankers and solicitors of the company, or from the secretary at the offices.

## THE MORTGAGE AND AGENCY COMPANY OF CEYLON (LIMITED).

FORM OF APPLICATION FOR SHARES.

(To be retained by the bankers.)

To the Directors of The Mortgage and Agency Company of Ceylon (Limited).

GENTLEMEN,—Having paid to your bankers, the Alliance Bank (Limited), the sum of £....., being a deposit of 10*s.* per share on..... shares in The Mortgage and Agency Company of Ceylon (Limited), I hereby request you to allot to me..... shares of £10 each in the company; and I agree to accept the same or any less number that may be allotted to me, and to pay the sum of 10*s.* per share on allotment thereof, and to become a member of the company, subject to the Memorandum and Articles of Association, and I request that my name may be placed on the register of members in respect of the shares allotted to me.

Name in full .....

Address .....

Occupation .....

Date .....

Signature .....

The remainder of the lime he throws into the vessel in small pieces before the metal is run into the converter. He does not, however, stop the blow when the flame drops and the so-called carbon spectrum lines disappear, but he continues it from 1 to 5 minutes. The time to stop the blow is generally indicated by the appearance of dense and copious brown smoke from the chimney of the converter in conjunction with white smoke round the edge of the flame, but the stopping point is better and more exactly regulated by taking small test samples out of the vessel and examining their fracture. The first test is taken 1 to 3 minutes after the drop, when the blower judges from the appearance of the flame the metal is nearly or quite dephosphorised. The test ingot is slightly cooled to set it, and then while still hot rapidly hammered out; it is then plunged in water till cold and broken under the hammer. If the fracture exhibits a leaden bluish white colour and long facets indicating the presence of phosphorus the vessel is turned up and blown again for as long a time as the blower thinks necessary. It is then again turned down and either sampled again (if the blower judges it desirable), and if necessary again blown, or if the first sample showed that the metal was nearly dephosphorised, it may after the second blowing be at once finished with spiegel without taking a further sample. If the first sample shows the characteristic silver white fracture or round polygonal facets of good steel the metal is of course not blown further but finished and poured at once. Mr. Thomas finds that an overblow of 2 or 3 minutes is generally sufficient. He does not claim the over-



blowing of Bessemer metal except when treating phosphoretic pig-iron in combination with the use of a calcareous or magnesian lining to the converter and the addition of large quantities of lime, so as to produce a highly calcareous slag in which the phosphorus may be removed as described, but he does not find overblowing beneficial in removing phosphorus under any other conditions.

### Original Correspondence.

#### THE FLAGSTAFF MINING COMPANY OF UTAH.

SIR,—By way of accumulating proof of the correctness of my contrivance of the Secretary's statement that he had not been able to learn from me the particulars of price or terms on which the present holders of the mine had authorized me to sell the same, I give you a copy of a memorandum drawn up by Mr. de Metz in August last, at the time the petitions were expected to come on. The memorandum is as follows:—

As the PETITION AGAINST THE FLAGSTAFF COMPANY OF UTAH (Limited).—Mr. Pearson is willing to use his influence with the petitioners to get the petitions postponed for three months on an understanding that Mr. Vincent will immediately co-operate with Mr. Pearson in the formation of a new company on the terms of the proposals as known to be in Mr. Pearson's hands. I entirely agree with the above, and advise the directors to fall in with the suggestion.—A. KERLEY, Aug. 2, 1879.

The first paragraph is in Mr. de Metz's own handwriting, and the second in the handwriting of the solicitor of the company. I think I may safely leave it to you to point out and explain the continuance of the extraordinary dealings in the shares, in which business I am told has to-day been done from 30s. to 40s., and will only observe that no such value can possibly attach to the stock. The company has no property, and supposing it had the whole of the locations, such a price as would be represented by 30,000 shares at 2s. each, —60,000—, is much more than the vendors ask for it; and let me here repeat that the property in the hands of the present company would be subject to the enormous debt and claims on it of from 40,000l. to 50,000l. Add to this the amount raised under the mortgage, and you have an indebtedness of from 70,000 to 80,000l. This to start with, and no capital to work with, and you have a company carefully provided with all the conditions calculated to ensure failure.

ELLIS PEARSON.

#### THE VAN CONSOLS AND GLYN COMPANY.

SIR,—I am an unfortunate shareholder in the Van Consols Company, now called the United Van Consols and Glyn Company, and I should like through your influential Journal to ask my co-shareholders if they are not of opinion, seeing the great expense incurred in the amalgamation and winding up of the company through the *laches*, or negligence, of the directors in signing duplicate certificates, &c., whether it is not advisable to test the question whether these expenses (if I am rightly informed some 4000l.) should not be paid by the directors themselves. It seems preposterous that the shareholders should have their property ruined, and then kept 24 years out of it by the action of their directors, and have also to pay their expenses. I think there are many of my brother shareholders who may be of the same opinion.

A LONG SUFFERING SHAREHOLDER.

#### WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,  
MINEOWNERS, STOCK AND SHARE DEALERS, &c  
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

We have always considered the simplicity of the cost-book the best adapted for Cornish mines, and when properly carried out, with a committee to audit the accounts every month, it is also the safest. The Crebor accounts, as our correspondent states, are a model for the Cost-book System. They show clearly, in the first place, receipts and payments from meeting to meeting; second, profit and loss for four months; third, balance-sheet showing assets and liabilities to the day of meeting. The day of meeting here was on the 6th, and the cost paid on the 30th of last month was charged up.

The cost-book is only dangerous where costs are kept back, and, therefore, a wrong balance brought forward; and sometimes, as in the case of many of the tin mines, dividends are paid with heavy debts on the books, but not always shown in the accounts sent to the out-adventurers, who do not attend meetings and make enquiries for themselves.

It is thoroughly believed among agents in Anglesea—we referred to the matter years ago—that under the great white rock at Parys Mountain a mass of ore similar to that of the great open-cast would be found. But nothing has been done to prove it, and as it is now in the sett of Morfa Du, and copper has gone up, six men have been put into the adit north of white rock to drive under a lode which produced good copper at a shallow level. This drive will in about 12 or 15 fathoms get under the said lode 15 fathoms deeper than it has yet been seen.

D'ERESBY MOUNTAIN.—In the agents' report received on Wednesday they stated that they had commenced cutting into the western side of the lode at No. 5, so as to communicate with the old excavations below; and since then some of the richest lead ever seen in the mine has been sent up to us from this place. The agents consider it of importance, as this lead ground is whole for 30 fms. long and 18 fms. high. We shall hear more about it in a few days; at present the agents have not put a value upon it per fathom.

Many people have thought us too sanguine in regard to this mine, and no doubt the great delay in getting at the ore at No. 5 (caused by difficulties the agents never anticipated in clearing a crushed in and broken down adit for nearly 300 fms.) has caused many people to consider us mistaken, but we apprehend the returns in future will speak for themselves, and show that all we have said will be fully realised.

It seems to be the wish of many shareholders to divide D'Eresby Mountain into 17 shares. At present it is in 1024 shares, of 20l. each, but on 512 of them there is 5l. per share to call up, and 2l. 10s. of it will be required at once. If any change, however, is made in the number of shares, which can only be done at a general meeting, the whole 5l. per share would have to be paid up. Of course, all shares dealt in are fully paid up.

SATURDAY, NOV. 8.—Market firmer. Carn Brea, 55 to 60; Dolcoath, 52½ to 55; Tincroft, 15 to 16; South Franches, 11½ to 12; South Condurrow, 14 to 15; West Basset, 11 to 11½; West Franches, 11 to 12; Grenville, 5 to 5½; Peever, 15 to 16; Uny, 1½ to 1¾; Van, 21 to 22; Great Laxey, 17½ to 18½; Leadhills, 2½ to 3½; Herodfoot, 2½ to 3½; Grogwinion, 3 to 3½; Roman Gravel, 11 to 11½; South Darren, 2½ to 3½; Tankerville, 5 to 5½; West Chiverton, 4½ to 5; Crebor, 5½ to 6; Devon Great Consols, 4½ to 5; Parys Copper, 17s. 6d. to 20s.; West Seton, 50 to 55; West Tolgus, 26 to 28; East Crebor, 25s. to 30s.; Mellanear, 3½ to 4; Cape Copper, 31 to 32; Flagstaff, 25s. to 30s.; Richmond, 9½ to 9¾.

MONDAY, NOV. 10.—Market very quiet. Van, 21 to 22; Roman Gravel, 11 to 11½; Great Laxey, 17½ to 18½; Leadhills, 2½ to 3½; Tankerville, 5 to 5½; West Chiverton, 4½ to 5; Crebor, 5½ to 6; Devon Great Consols, 4½ to 5; Parys Copper, 17s. 6d. to 20s.; West Seton, 50 to 55; West Tolgus, 26 to 28; East Crebor, 25s. to 30s.; Mellanear, 3½ to 4; Cape Copper, 31 to 32; Flagstaff, 25s. to 30s.; Richmond, 9½ to 9¾.

TUESDAY, NOV. 11.—There is not much doing to-day, the dealers being busy preparing for the settlement, and prices generally are about the same as yesterday.

WEDNESDAY, NOV. 12.—Market easier for tin shares. Carn Brea, 55 to 55½; Dolcoath, 52½ to 55; Cook's Kitchen, 3½ to 4; East Lovell, 2½ to 3½; East Pool, 18 to 20; South Condurrow, 14 to 15; South Franches, 11 to 12; Tincroft, 15 to 16; West Basset, 11 to 11½; West Franches, 11 to 12; Grenville, 5 to 5½; Peever, 15 to 16; Uny, 1½ to 1¾; Van, 21 to 22; Great Laxey, 17½ to 18½; Leadhills, 2½ to 3½; Herodfoot, 2½ to 3½; Grogwinion, 3 to 3½; Roman Gravel, 11 to 11½; South Darren, 2½ to 3½; Tankerville, 5 to 5½; West Chiverton, 4½ to 5; Crebor, 5½ to 6; Devon Great Consols, 4½ to 5; Parys Copper, 17s. 6d. to 20s.; West Seton, 50 to 55; West Tolgus, 26 to 28; East Crebor, 25s. to 30s.; Mellanear, 3½ to 4; Cape Copper, 31 to 32; Flagstaff, 25s. to 30s.; Richmond, 9½ to 9¾.

THURSDAY, NOV. 13.—Market for lead shares very firm at an advance. Tin shares again weaker. Van, 21 to 22; Roman Gravel, 11½ to 11¾; Herodfoot, 2½ to 3; Leadhills, 3½ to 4; South Darren, 2½ to 3½; Tankerville, 5½ to 6;

West Chiverton, 4½ to 5½; Great Laxey, 17½ to 18½; Grogwinion 3 to 3½; Wye Valley, 10s. to 15s.; West Wye Valley, 10s. to 15s.; South Condurrow, 13½ to 14½; South Franches, 10½ to 11½; Tincroft, 14½ to 15½; West Basset, 10 to 11; West Franches, 11 to 12; Grenville, 5 to 5½; Peever, 15 to 16; Uny, 1½ to 1¾; Van, 21 to 22; Great Laxey, 17½ to 18½; Leadhills, 2½ to 3½; Herodfoot, 2½ to 3½; Grogwinion, 3 to 3½; Roman Gravel, 11 to 11½; South Darren, 2½ to 3½; Tankerville, 5 to 5½; West Chiverton, 4½ to 5; Crebor, 5½ to 6; Parys Copper, 17s. to 19s.; Devon Great Consols, 4½ to 5½; Cape Copper, 31 to 32; Flagstaff, 17½ to 19½; Panullicio Copper, 3½ to 4½; Santa Barbara, 37s. 6d. to 42s. 6d.

FRIDAY, NOV. 14.—Market generally firmer. Carn Brea, 52½ to 57½; Dolcoath, 52½ to 57½; East Caradon, 3 to 3½; East Lovell, 2½ to 3½; East Pool, 19 to 21; Great Laxey, 17½ to 18½; Grogwinion, 8 to 8½; Herodfoot, 2½ to 3; Leadhills, 3½ to 4; Mellanear, 4 to 4½; East Crebor, 25s. 6d. to 27s. 6d.; Parys, 18s. 6d. to 18s. 6d.; Devon Great Consols, 4½ to 4¾; South Franches, 11½ to 11¾; South Condurrow, 13½ to 14½; Tankerville, 5½ to 6; Tincroft, 15½ to 16½; Van, 21 to 22; West Asheton, 2 to 2½; West Basset, 10½ to 11½; West Chiverton, 4½ to 5; West Franches, 11 to 12; South Darren, 2½ to 3½; Roman Gravel, 11 to 11½; West Seton, 47½ to 50; West Tolgus, 25 to 27½; West Wye Valley, 12s. 6d. to 17s. 6d.; Wye Valley, 12s. 6d. to 17s. 6d.; Agar, 5 to 5½; Wheal Basset, 3 to 3½; Crebor, 5½ to 5¾; Grenville, 5 to 5½; Peever, 15 to 16; Kitty, 2½ to 3.

MR. WILLIAM H. H. WATSON, DEALER IN RAILWAY STOCKS AND MINING SHARES at net market prices, of the day.

Address: W. H. H. WATSON, 1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON, E.C.

### Meetings of Public Companies.

#### UNITED VAN CONSOLS AND GLYN MINING COMPANY.

An extraordinary general meeting of shareholders was held at the Guildhall Tavern, Gresham Street, yesterday.

Mr. J. C. BOLTON in the chair.

Mr. J. Cooper (the SECRETARY) read the notice convening the meeting, which stated that it was called for the purpose of confirming the special resolution passed at an extraordinary general meeting held on the 28th ult., rescinding the original Articles of Association of the Company, and substituting therefor new Articles of Association.

The CHAIRMAN said, before moving the confirmation of the resolutions passed a fortnight or so ago, he would make a few remarks with regard to the position of the mine. With regard to the letter in the MINING JOURNAL last Saturday, which had created alarm in the minds of a few of the shareholders—to the effect that there were four lawsuits pending by the company—he begged to state that this was a mistake. There were no lawsuits pending by this company. The liquidator of the Van Consols Company had one suit pending, and three summonses; but a summons was a very different thing to a lawsuit. It was a sharp and decisive way of bringing a debtor, or a supposed debtor, before the Chief Clerk, and getting a prompt settlement of the matter. With regard to the suit, the directors found that before anything was done, very careful accounts were made out for the Van Consols books, that a statement was prepared and submitted to an eminent counsel, whose opinion was considered by careful solicitors, and then put before the Chief Clerk of the Master of the Rolls, without any comment or recommendation on the part of the liquidators. The decision of the Chief Clerk was, prompt and sharp, that proceedings should be immediately taken, as the four gentlemen whose names were brought before him were more or less indebted to the Van Consols Company. That being the case the directors thought they could not, in justice to themselves or the shareholders, intervene in the matter. With regard to the Van Consols shares, the directors had had three different contracts brought before them, and the result was that between 9,000 and 20,000 shares had been allotted to various shareholders in that company, leaving 3000 or 4000 more, and he hoped these would be applied for at an early date, when they would ask the Chief Clerk to fix the time after which no person could come in and ask for shares. With respect to the progress of the company, he might state that the first parcel of lead had been sent up, and that the pleasure of sampling 15 tons of lead last week, for which four tenders for good lead were invited. All tenders, and the parcel was sold very advantageously last Tuesday.

Colonel PERCIVAL: At what price?

The CHAIRMAN: At 10l. 12s. 6d. per ton. It was a small parcel, but they had the certainty of a larger parcel for the December sales, and he hoped they would have still larger returns thereafter. With regard to the underground workings, in the western workings towards Gundry's shaft, every fathom traversed had been in productive ore, and the managing director informed him that there were several months' work there. A winze had been sunk to test the ore in depth, as well as in length, and they were so satisfactory that it was decided to continue the level further on, so as to enable two parties to work, to continue the level to Gundry's shaft, and then to sink the winze. The explorations eastward towards Glyn shaft had been equally satisfactory. With regard to the barytes, the matter had not yet been carried through. A well-known gentleman from Liverpool had promised to go to Llanidloes to see Mr. Thomas with regard to the barytes, but as Mr. Thomas had been in town, the meeting had not yet taken place. When it did, no doubt an advantageous contract would be made.

Mr. TAYLOR asked if the gentleman referred to was Mr. Blackwell? If it were, he (Mr. Taylor) was quite satisfied; but he asked the question because some of the people who bought the barytes from the old company did not pay for it.

The CHAIRMAN said he did refer to Mr. Blackwell. (Hear, hear.) They had apparently driven through the north lode, and the ground had been explored some little distance in a westerly direction, and the result was that quartz had been found with spots of metal upon it, and that after going in a little distance, they found cubes of lead half-an-inch in diameter. This led the Directors to believe that the great North or Van lode had really been cut, and that it would not be long before they had some exceedingly satisfactory accounts of this portion of the ground.

Colonel PERCIVAL: What is the width of the lode?

Mr. W. THOMAS: We cannot tell that yet. The chairman added that the satisfactory discovery had been met with within half a fathom of the place indicated by Mr. Thomas and Captain Roach.

Colonel PERCIVAL: At what depth did we intersect the lode?

Mr. THOMAS: At about sixty fathoms.

The CHAIRMAN said the shaft which they had sunk on the southern lode would be able to assist them in the discovery about the north lode, in the making of cross cuts, so that they would not have to sink another shaft to bring the metal up, or to drain the workings. Under the superintendence of Mr. Thomas, a new wheel of 60 ft. diameter had been constructed, and this would be at work next week. This, he believed, the second largest water-wheel in the country. The directors had decided to close the capital account at the end of this month, so as to be able to present at next meeting a clear half-year's accounts for the 1st of December to the 31st of May, and he hoped those accounts would be satisfactory to all the shareholders. (Hear, hear.) Large numbers of applications for preference shares had come in during the past week, and up to Thursday night 11,274 of those shares had been allotted. (Hear, hear.) The directors did not propose to issue more than 12,000 of these shares at present, at par, so that there were 726 shares now left to be taken up, and these would be allotted as they were applied for. It might at some future time be necessary to issue some more shares to make a tramway from the works to the town of Llanidloes, but that would be an inexpensive work, and he hoped the shares would, by that time, command a high premium.

Mr. TAYLOR asked what working capital the 12,000 shares would yield after paying the dividends.

The CHAIRMAN thought the amount would be quite sufficient. He did not know the exact amount, but it would be more than 1000l.

Mr. TAYLOR thought they should have 3000l. in hand, for if an accident happened and they had to issue the remaining shares they would do so at a disadvantage. He believed that 3000l. in hand would place the company in a much more satisfactory position in every respect.

Mr. SUTTON seconded the suggestion which the chairman said should have the careful consideration of the board. In the event of any accident, he thought there would be no difficulty in raising a little money, but he was sure the directors would take the responsibility of finding it. The only thought of the directors was to make the company one of the best in the country, and to do all they could to bring about that result. (Hear, hear.)

The CHAIRMAN then moved the confirmation of the resolutions passed at the meeting on Oct. 28, including the suggestions which the board adopted with respect to half-yearly meetings and accounts, and the remuneration of the directors.

Mr. THOMAS seconded the motion, and added that he quite concurred in Mr. Taylor's opinion that it was desirable to have more than 1000l. capital in hand. He (Mr. Thomas) had worked for two years without remuneration, and had found money to work the mine. (Hear, hear.)

The motion was carried unanimously.

On the motion of Mr. TREHERNE, seconded by Col. PERCIVAL, a vote of thanks was passed to the chairman and directors, and the meeting then closed.

SANTA BARBARA GOLD MINING COMPANY.—At a meeting of directors on Thursday, it was resolved that an interim dividend of 1s. 6d. per share on account of the current year be declared, payable on Nov. 22.

#### MINING NOTABILIA.

THE CALLINGTON DISTRICT.—Mining is again looking better here, and renewed activity appears to have set in. South Kitt Hill has gone to work, under the name of the Cornwall Great Consols. The fire was lighted at Holmshush on Thursday, and the shaftmen engaged to go to work. The Duchy agents gave the liquidators 25 days' notice to clear out or work, and, consequently, work has been commenced. Wheal Ashburton is sold, and three-fourths of the purchase money has been paid, so that it is likely to start shortly. At Old Kitt Hill a pair of men is working in the adit, and a very good tin lode has been discovered.

THE WHEAL WREY, LUDCOTT, AND NORTH TRELAWNY.—The unfortunate shareholders, after paying calls to the amount of 13s. 4d. per share, by order of the Stannaries Court, have received notice that a dividend of 4½d. per share is returnable on the winding-up of the concern. The extraordinary proceedings connected with this affair has entirely annihilated all further mining speculations in the Liskeard district.

WEST KITTY.—The engine will be at work on Saturday (this day), and the agents expect that the prospects that have been made in the last four weeks. There is considerable interest and not a little excitement about this property, and the success which has attended the efforts of the executive. The shares

have been inquired for on the market, but at such prices as render it impossible for any business to be done. Mr. John B. Reynolds, of Walbrook, has taken the whole of the matters of the company in hand, and is sustained by gentlemen of influence and wealth. It is estimated that about 30 to 40 men will be employed within a month, and considerable improvements are anticipated, especially in those levels where the appearance of the lode is so favourable.

#### FOREIGN MINES.

ST. JOHN DEL REY.—Telegram from Morro Velho, dated Rio de Janeiro, Nov. 11: Produce for the month of October, 32,500 oits. = 12,593½l.; yield, 6.3 oits. per ton.—Quibá: 200 tons stamped in 15 days; yield, 2.7 oits. per ton.

RIOMOND CONSOLIDATED.—Telegram from the mine at Eureka, Nevada: Week's run, \$48,000—\$36,000 from No. 1 furnace, and \$12,000 from No. 4—from 820 tons of ore. Refinery, \$45,000. Mine much improved.

Oct. 22: Since my last explorations in the mine have been carried on with unusual regularity. The 200 cross-cut has been advanced 3 ft., and a winze sunk from the end to connect with the rise being put up from the 400; this connection has been made, which gives thorough ventilation in this part of the mine. This winze and raise has laid open a very nice body of good ore. The 200 cross-cut is being driven in ore of a very fair grade; the width of the ore in the present end is 8 ft. wide. A cross-cut has been started in the 200 ft. level to explore the ground underneath the flat chamber. It has been drifted 44 ft., and the ground in the present end is looking very favourable. The 400, on quartzite, has been drifted 22 ft. without any change to mention. The drift west from the No. 13 chamber has been extended a total distance of 73 ft., in the present end there are seams of iron and low grade ore. The drift north from the No. 12 chamber has been extended a total distance of 54 ft.; the last 10 ft. drifted is in ore of good quality. The 600 west drift has been extended 25 ft.; the ground is more favourable for drifting, and ore indications are also very favourable. The 600 north fissure has been advanced 11 ft.; work in this drift has been suspended, and the men put to sink a winze on ore indications passed through in the drift. Not much exploration has been done in the two ore bodies in the 600 since my last; preparations have been made for the extraction of ore, and the first timbers are placed and ore chutes are ready, and the extraction of ore has commenced. The 800 west drift has been advanced 10 ft., and the ground is still hard, but is very favourable for ore. The 900 west drift has been extended 25 ft.; the ground in this drift is changed, it being now in hard limestone. A winze has been started in the bottom of the 900 in the east quartzite drift; at present it is in broken ground. The furnaces are in good working order. The No. 1 smelter during the past week has run an average of 54 tons per diem. All the machinery, both in the mine and smelting works, is in good working order.

LONDON AND CALIFORNIA.—The clean-up at the Original Amador Mine for the month of October is estimated at \$7000.

SIERRA BUTTES (Gold).—Result of the working at the Sierra Buttes and Plumas Eureka Mines for October.—Sierra Buttes: Total receipts, \$27,547; total working expenses, \$22,116.—Plumas Eureka: Total receipts, \$48,368; total working expenses, \$23,316.

ALMADA AND TRITO CONSOLIDATED.—Telegram from Mr. Climes, dated Oct. 23: Profit for quarter ending Sept. 30, \$6815 net.

COLORADO UNITED.—The manager's accounts for August and September show:—For August a net profit of \$1868.51; for September a net profit of \$1739.32.

PANULICILLO COPPER.—F. G. Welch, Sept. 26: Although the miners did not turn up to work so soon as hoped my anticipated production of about 35,000 quintals metrico will I think be realised, as from to-day to end of month I hope to pass on 11,000 quintals metrico to calcine cauchas.

DON PEDRO.—Captain Vivian reports, under date October 18, as follows: Produce: First division of October, 285 oits.—Mine: No. 2 Incline Drawing-shaft: Progress very slow in consequence of another burst of water, which brought with it a large quantity of fine sand, again completely choking the 40 ft. level cross-cut the whole length, thereby cutting off all ventilation, and consequently we had great difficulty in clearing it, but I am pleased to say this has been accomplished, and the work in said shaft resumed, and is being carried on without interruption. I am in hopes that this will be the last drawback to us, for certainly we have had difficulties enough to contend with, but these will, however, soon be forgotten when the bottom of the mine is reached, and commencing raising large quantities of gold.—No. 1 Incline Sump-Shaft: Repairs have been carried on below Vivian's shaft without interruption, and a very good and substantial job has been done.—Bryant's: The slopes in the new lode are without change to note. We have been exploring in No. 8 old shoot (section 27), where ore ground has been met with, from which some moderate samples have been taken; will let you know more particulars regarding this next mail. I may, however, mention that the lode is of a very promising character.

The mine captain's report, dated October 18, is as follows:—General Remarks: The ore has been derived principally from the new lode at Bryant's and some ore in driving the level below, preparatory to running up a rise from said level to stopes above on new lode to test the intermediate ground, and for facilitating work on the above-named stopes. No. 2 stopes continues in crushed ground, and rules of very low class. The lode in No. 1 stopes is very bumpy and irregular, and on the whole, of very low standard. No. 3 stopes is in firmer ground than we have had for some time past, and the lode has a healthy appearance, but the ore derived is of very low quality. The cross-cut, south of last-named stopes, is still in abeyance for want of hands. The exploratory level is also suspended, force being more urgently required elsewhere. In the workings beneath a little ore has been obtained from prosecuting the level, but the lode is small and irregular. No. 2 stopes in these workings is resumed, and the lode improving in size and appearance. No. 2 incline shaft is progressing slowly, difficulty being experienced with foul air, caused by another choke in the 40 ft. which for a time stopped all communication and ventilation between this and No. 1 incline shaft, this choke being in consequence of a strong burst of water, debris, &c. Every exertion made to push this work forward, but the bad air prevented our making as much progress as we would wish; the choke, however, is now cleared, and air good in both inclines.—No. 1 Incline Shaft: Another set in, and blocked tight, and the sides lathed, &c., and three props put under the caps behind to strengthen the same.—Drainage: Pole packed, and other minor repairs made.

CHONTALS.—The directors have received advices from their manager, dated Oct. 5, who reports during the past month we have treated 1830 tons of stuff, which produced 200 ozs. of gold, or an average of 2½ dwts. per ton. Total cost at the mines for September, 800l.; value of the gold, 532l. 10s. 288l. Last month we got into a very hard bar of ground in Estrella Mine, and for the greater part of the present month would not pay for stoping, so that I put the men to rise or cut through it. They have now gone up 8½ varas, and are already in better ground, but that by another week I think we shall again be in a position to get valuable quartz from this stopes.—San Sebastian: We have stoped from the new stopes west 438 varas; this stopes in the past month did not turn out as I expected, but there is every prospect now of raising profitable quartz here during the present month. We have stoped from No. 2 stopes 107 varas. We have stoped from the back of the lode, east of eastern rise, 75 varas, and cleared 20 varas through old workings to communicate the main level with the north branch referred to in July report. Total quartz raised, 1375 cars, or 1200 tons, worth on an average 2 dwts. per ton.—Estrella Mine: We have driven the main level 10½ varas; the lode is 3 ft. wide, now worth 4½ dwts. per ton, and improving as it extends west. We rose in new rise 17½ varas, and holes in crushed ground. We have stoped from No. 1 stopes 155 varas. In No. 2 stopes, where we had the shoot of gold, it is very plain that this hard bar of ground runs between the shoots of gold, as we had it in the main level below, and were obliged to use dynamite to blast the rock; but 7 varas put us through, and now we have in the end of the main level ground good for progress, with a lode which, if it does not improve further, but only keeps as it is for three months, will open stoping ground sufficient to give 12 months' fair profits; but to keep the stamps going, which is now in a condition to pass through 10 tons, with 24 heads, and to explore and make new discoveries, using economy, we ought at least to have 500l. per month to carry out the works properly and to keep the machinery and mines in good repair. Total quartz raised in Estrella during the past month 721 cars, or 630 tons, worth on an average 2½ dwts. per ton.

EBERHARDT AND AURORA.—Capt. Drake: Last week I did not report to you for the reason we were in a change of ground. I am pleased to state that there has been no shale for the last 75 ft. of running. We are now in lime and spar, and I consider the character of the ground more favourable for ore than any we have seen since we passed through the clay seam in the tunnel.

ISABELLE (Gold and Silver).—Lewis Chalmers, Oct. 20: In sending you the foreman's report for the bygone week it may not be out of place to call your attention to an article in the last Mining Journal you sent me (Sept. 20), headed Rock Boring Machines, and giving the results attained by a Darlington drill, which are very good. It may interest you to know how the performances of the National drills used by us in the Isabelle tunnel compare with those of home manufacture. I enclose comparison, from which you will see that one of our machines bored 565 ft. more than the Darlington, and in one hour less time. I should like very much to make a similar comparison between ours and Col. Beaumont's famous drills, but am unable to do so without the information I have twice asked for from you. We are now running 52 ft. a week of an 8 by 9 tunnel with two Nationals, but we are still, as you will see from the progress report for last week, losing too much time waiting for smoke fumes to disperse, sometimes as much as three hours. I am giving my attention to this matter with some hope of getting rid of these noxious fumes more rapidly. There is scarcely a day passes without some of the miners being run out on the stone cars more dead than alive. On some, again, the fumes seem to have an effect similar to that produced by nitrous oxide, or laughing gas. I have seen men under this influence make no difficulty in running another 100 ft. a month were I rid of these fumes. Foreman's Report for Week Ending Oct. 18: Total distance from monument to face of tunnel 1158 ft., advance for the week 52 ft. The rock is of the same character as at last report. Machinery all running smooth.

ASHETON MINES.—The works at this mine, which were partially suspended in consequence of the low price of lead, are being actively resumed, and now that the price of lead has risen and become more remunerative, regular samplings of lead ore and blende will be again made.

GENERAL MARKETS.—Markets have been very active during the week, and a large amount of business has been done, particularly in English railways, which show a further advance all round. North-Eastern, Brighton, North British, and Caledonian have risen from 2 per cent. to 4 per cent. The traffic receipts continue to show an improvement, the North-Eastern return being an increase for the first time for many months. The high figures touched a day or two ago naturally brought in a few sellers, and prices consequently close somewhat below their best point. American and Canadian railways are still in demand, and continue to rise. Mexican railways are higher, and are, I consider, worth buying now. The foreign market has been rather dull, owing chiefly to the state of the French markets, and small amount of business doing. There has been a decline in the Bank rate this week quiet, but not very much. East Caradon and a few others have advanced in price.—W. H. H. WATSON, 1, St. Michael's Alley, Cornhill, Friday Morning, Nov. 14.



## Mining Correspondence.

## BRITISH MINES.

**ABERLEIGH.**—John Roberts, Nov. 12: I have nothing new to report this week, all the points of operation are very much the same as they have been for some time past. We have not taken down the lode in the stope on the shale for a fortnight. The stopes on the great lode are very much the same in value as they have been. We expect to hole the winze between the No. 2 and the No. 3 by the end of this week, when we shall let a stope on each end of it, and we shall also be able to put a pair of men to drive a cross-cut at the No. 3 in the present forepart of the end on the shale course, so as to prove the value of the great lode at that depth. The valley cross-cut is looking very kindly, there are good patches of blende and gossan. We have not done anything in the No. 2 cross-cut for the week, as the men have gone, and I have not yet relet it. The stone-breaker started to-day, and works splendidly. The driving arrangement seems perfect, notwithstanding the little difficulty that first appeared to make arrangements to drive from our present wheel, and fix our machine to deliver itself in the crusher-house. We are pushing on the dressing with all possible speed.

**BEDFORD UNITED.**—R. Gough, Nov. 5: The lode in the 133 east is about 2 ft. wide, worth for muffle and copper 6s. per fathom. The lode in the 127 east is 3 ft. wide, worth 8s. per fathom. The lode in the 115 east is 3 ft. wide, producing good stones of lead, and very promising for improvement. Two stopes in the back of the 133 are worth 10s. each, and one stope in the 127 is worth 8s. per fathom. The tribute department is much the same as when last reported.

**BETWIS-Y-COED.**—Chas. J. Sims, Nov. 13: Saturday last being our monthly setting the following bargains were set:—To stope in the back of the deep adit level, on the north part of the lode, by two men, at 15s. per fathom; lode worth 10 cwt. of lead ore per fm. To stope in the back of the deep adit level, on the north part of the lode, by two men, at 30s. per fathom; lode worth 15 cwt. of lead ore per fathom. To stope on the south part of the lode, in back of the deep adit level, by two men, at 25s. 6d. per fathom; lode worth 25 cwt. of lead ore per fathom. To stope in the back of this adit, by two men, at 25s. 6d. per fathom; lode worth 20 cwt. of lead ore per fm. To stope in the back of ditto, by two men, at 20s. per fm.; lode worth for lead ore 15 cwt. per fm. To stope in back of ditto, by two men, at 25s. 6d. per fm.; lode worth 20 cwt. of lead ore per fathom. We have been obliged to suspend the driving of the 30, east and west of flat-roof shaft, on account of the falling off of the water which supplies the pumping-wheel, but we shall lose no time in connecting the rods to the pumping-engine, so as to continue our operations in this part of the mine. The machinery is in good order and working well. We have to-day sold to Messrs. Joseph Walker, Parker, and Co. 30 tons (computed) of lead ore, at 11s. 1s. per ton.

**BLUE HILLS.**—S. Bennett, P. Vian, Nov. 8: In the bottom of the shaft (now about the 42) there are some small veins of tin stuff just on the back of the lode; the lode itself is not as yet altered much since last reported on. In the 30 east end the lode is 1½ ft. wide, and worth 6s. to 7s. per fathom. A stope in the bottom of the lode, west of the shaft, is worth 7s. per fathom. The tribute pitches are without much change.

**BODIDRIS.**—H. Hotchkiss, Nov. 11: Maes-y-pwll lode: In the 17 east we have not taken down any more of the lode since my report of last week, but are working by the side of the lead ore-bearing part in order to take down the ore by itself. We find that the ore still carries on, and hope when taken down again shall have a further improvement. The 30, west of shaft, is improving again for lead, and the lode is looking much more kindly. Other points of operation are without change to notice since last week. Everything is progressing regularly and satisfactorily.

Nov. 13: Have taken down lode again in 17 east, and find it further improved for lead ore; best sight as yet seen in Bodidris Mine. Further particulars in a post or two.

**CAMBRIAN MINES.**—Captain Thomas Glanville, Nov. 8: ESKAIR-FRITH: Eastern Shaft: The shaft sinking below the 86 yard level will yield 2 tons of copper ore per yard. The lode in the 86 yard level east will produce 3 tons of copper ore per yard. The stopes in the back of the 86 yard level will yield 3 tons of copper ore per yard. The stopes in the back of the 70 yard level east will produce 3 tons of copper ore per yard. We are sending off another lot of copper to Swansea.

**CLEMENTINA.**—J. Roberts, Wm. Sandoe, Nov. 11: We have completed the clearing the roadside shaft and all the levels. We found the eastern end driven close on 10 fathoms from the shaft, and from appearances they had a good lode for that length. The ground in the roof is all stopped away, and they attempted to work the bottom also but could not succeed with the quickness of the water. We dug down under water to see what they left behind, and found splendid lead in different places, but we could do no more than they till we sink the shaft, and so drain the ground. This we purpose doing as soon as the men have completed dividing down the shaft to the level, which we calculate will be completed by the next setting-day, and in order to facilitate this work we shall try to arrange to let the whole 10-in. life in one contract. Referring again to the eastern end, we drove in this about 1½ fathom, but as we could not obtain much back by the driving we suspended it, and shall extend the deeper level as soon as the shaft is down the above-named depth. In the 34, at the engine-shaft, we have driven in the north end a little more than 2 fathoms; the lode during that time was producing saving work for lead, but has since then very much improved, and will now yield from 10 to 15 cwt. of lead to the fathom. This fact is simply a fulfilment of what was suggested some time ago would be likely to take place, and we anticipate a further improvement as we get nearer the level of the shaft. The lode in the 34, at the engine-shaft, we have driven nearly 1 fathom; the ground continues hard, and we have some 7 or 8 fathoms more to drive to reach the shoot of ore in the bottom of the 25 fm. level. The lode, however, is showing good spots of lead, and may become very productive of that ore before we drive that distance. The western end, in the 25, which we started as a trial from the intersection with the north and south lode, we have driven about 4 ft., and so far as we can yet see it is a trial of great promise, and should be proceeded with, as nothing has been done on this side of north and south lode, and by continuing west we have not only the great depth that there now is on surface, but far greater depth will be obtained as the mountain rises in that direction. The stope in the 25 fm. level, directly opposite to this end, is yielding good lead; we have stoped about 8 fathoms, and the lode has yielded from 10 to 15 cwt. per fathom. The general appearance of the mine is very encouraging indeed, and we believe that shortly we shall get the mine into a paying condition. We look upon the north and south ends, in the 34, as likely very soon to open good working ground, and the Roadside shaft will also lay open a great piece of comparatively rich ground when sunk to another level, which we calculate will take about six months from the present time. The shaft sinking in the 34, at the engine-shaft, from the bottom end and from the stope, which will assist very much in this work. We are now dressing the lead we have at surface, and we hope to sample a parcel of 10 tons against next month.

**COMBARTIN.**—J. Harris, J. Comer, Nov. 13: The lode in the winze below the 13 is about 3 ft. wide, containing veins of blende, white iron, and a little lead throughout; saving work for dressing. The lode in the 12 south-east is 2 feet wide; also carrying seams of blende and white iron, with thin seams of lead—a kindly looking lode. In the north-west adit end the lode has considerably improved in appearance; it is about 4 ft. wide, and producing nice stones of lead and blende, and we are now looking forward for an early improvement for lead. The adit cross-cut is without change, but fair progress is being made in the driving. In the stope below the 12 on counter lode we are breaking some excellent work for lead, but the ore in the stope is short.

**CORNWALL GREAT CONSOLS.**—H. Miners, Nov. 13: I feel great pleasure in informing the shareholders that the machinery since the day of starting has worked splendidly, and the mine will be drained by Saturday, Nov. 16, when we shall at once make preparation for raising and stamping tin ores. I have already set the sand levellers at surface on tribute, and believe the men will get good pay at the present rate. The lode in the 125 east is very much improved, and the work on tribute when the mine was suspended asking to be allowed to take contracts on the same principle. This speaks well for the future, and I am more fully convinced from my further knowledge of the property that when developed, and the junction of granite and killas reached, great success will attend the undertaking.

**CROOK BURN.**—W. Vipond, Nov. 8: The men continue both the sinking and walling of the shaft, two shifts sinking and one walling in the 24 hours. They will complete the walling of the shaft next week. They have gone through a limestone about 3 ft. thick, with small threads or branches running about in it, both these and the dip of the lode indicate a vein not far off the shaft.

**CWMYSTWTH.**—Nov. 12: We have now reached the point where the new lode and Mitchell's came together. Owing to our having the two lodes to contend with—which are very hard—our progress during the past week has been rather slow. Near the junction the lode contains a little more lead, and is very large. We shall now leave Mitchell's lode to the north, and follow the new lode, which has made a very sharp turn to the south, as it should do to maintain its right bearing, it being shifted somewhat to the north by the influence of Mitchell's lode. What effect the separation of the lodes will have to their value we are not prepared to say, but a little time will prove. We are progressing fairly with Gill's lower level, and shall communicate in the coming month. Our water is very much less.

**DENBIGHSHIRE CONSOLIDATED.**—R. Prince, A. Francis, Nov. 13: A great change has taken place during the last few days in the 112 east main lode; from it we are now putting by leadstuff for the dressing-floors. The lode is better defined, and will, we think, further improve as we advance. In the new cross-cut north we are passing through highly mineralised ground. The hand rock-drill having arrived we hope to give it an early and thorough trial, and trust it will give satisfaction. In the 66 level west we are now close to the points where, as before stated, we expect to intersect a great body of ore. The tribute pitch shows well.

**DERSBY MOUNTAIN.**—J. Roberts, W. Sandoe, Nov. 11: Monthly Report: At the No. 1 we have driven about 1½ fm.; the lode is not so rich for blende as it has been, yet still it is a very kindly lode, and we cannot help thinking that it will, as greater depth is attained, produce good bunches of lead. In the No. 2 stope we have had to clear away a lot of the old men's rubbish, which they put there to save the cost of wheeling out, and also to beat away a piece of comparatively poor ground in order to get at the main leaders of lead further down. We are now getting on the better part of the lode, and with the leadstuff we shall be able to raise here and at No. 5 we shall without much difficulty keep the crusher going. At the No. 5 we have forked out the water to the bottom of the old workings or nearly so, as we believe, and have stoped away some of the sides of the old dump in order to make room for sinking deeper; the lode is quite as rich as we could have expected to find it. The stuff produces 5 per cent. of lead, which is about 1 ton to the cubic fathom. About 4 fms. from this point we are cutting through the lode on the western side of the level in order to make room for another communication with the old workings, which will enable us to carry on the stopping and sinking at the same time. In cutting through the lode here it looks far better than we anticipated, and is improving as we are cutting further into it. We have cut into the lead part about 1½ ft., and have a great distance to the footwall. Seeing that there is 500 fms. of this lode not cut through or seen, and this lead appears to be making into it, we have reason to hope and believe that we have a very important piece of ground standing untouched; and seeing, too, that this is only at the day level, although we are 30 fms. from surface in this place, we can but be very sanguine about the future of the mine. We have been a little deterred in progress in dressing on account of the dry weather, but we do not anticipate a speedy recurrence of this, and

hope that our dressing, with all other operations, will go on without hindrance or delay.

**DUBBY SYKE.**—W. Vipond, Nov. 8: There is not much change in the shaft here. The winze is rather more mixed in with the barytes in the vein or branch, with spots of ore. The water does not seem to increase at all, and the sinking is apparently going on very well. The men have sunk last month 1 fm. 1 ft., and the shaft now down altogether 9 fms. 2 ft.

**EAST CHIVERTON.**—R. Southey, Nov. 13: Since the last general meeting of the shareholders we have completed sinking the engine-shaft to the 90, cased and divided the same, put in footway, shaft solar, &c. We have now commenced to drive a cross-cut south at this level to intersect the lode, by six men, at 2s. 10s. per fm., which we hope to cut during the ensuing month. Some of the men that were engaged in sinking the shaft will now be available for driving and stoping the back of the 74, which we purpose doing forthwith. The ground in the 14 cross-cut south is easier for driving, and better progress may be looked forward to in future towards cutting the lode, the end is being driven by four men, at 10s. per fathom. Since the change in the pitwork our engine continues to work at a very easy cost as regards consumption of coal, and powerful enough to put us to the 120.

**EAST DARREN.**—Nov. 12: The lode in the 104, east of cross-cut south, is at present disordered by a cross joint, now yielding 10 cwt. of ore per fathom. The lode in the winze sinking under the 92, west of cross-cut, is 5 ft. wide, yielding saving work for dressing. The driving in the 92, west of cross-cut, is suspended while the winze is being sunk. The 12, west of eastern end, is let to drive on tribute in stoping the 92, east of cross-cut, on No. 2 branch lode, is 2 ft. wide, yielding from 7 to 8 cwt. of lead ore per fathom. Winze under the 80, west of cross-cut, is suspended for the present. Lode in the 80, east of cross-course, near Taylor's shaft, is large, yielding 17 cwt. of lead ore per fathom. Stope over the 80, east of cross-cut, on south lode, lode 2½ ft. wide, yielding 2 tons of lead ore per fathom. Stope over the 80, west of cross-cut, on south lode, lode 8 ft. wide, yielding 10 cwt. of lead ore per fathom. Stope under the 80, east of cross-cut, on south lode, lode 4 ft. wide, yielding 1 ton of lead ore per fathom. Stope over the 80, east of cross-cut, on south lode, worked out to the flat. Cross-cut driving south at the 49, ground letting out water, and containing branches of lodestuff. The 55, east of Skinner's, will be driven as soon as the open workings are made secure. In the pitch, under the 116, 120 fms. east of Taylor's shaft, the lode is 8 ft. wide, yielding 1 ton of lead ore per fathom. In a pitch under the 104, east of Taylor's shaft, lode large, fallen off in produce, now yielding 15 cwt. of ore per fathom. In a pitch over the 92, 130 fms. east of Taylor's shaft, the lode is large, yielding 12 cwt. of lead ore per fathom. In a pitch under the 80, 120 fms. east of Taylor's shaft, the lode is 6 ft. wide, yielding 10 cwt. of lead ore per fathom. Company's slime and halvan ore let at 5s. per ton.

**EAST LONGSTON.**—R. Harris, Nov. 10: The men are pushing on the adit level with all speed; the ground is a little more favourable for driving, and we are making good progress in nearing the east and west lode. I shall put on extra men next week.

**EAST ROMAN GRAVELS.**—A. Waters, Nov. 13: The 97 cross-cut is driven about 5½ fms., but we have not yet cut the main part of the lode. Considerable water is flowing out of the forepart—hence we must be near the lode. We are driving here by nine men, at 14s. per fathom. The 88 south is being driven by four men, at 6s. per fathom, lode not to value. The 75 south, by four men, at 6s. per fathom, lode not to value. The 64 south, by two men, at 5s. 10s. per ton, is worth ¾ ton per fathom. The pitch in the 75 south, by two men, at 5s. 5s. per ton, is also worth ¾ ton per fathom. No. 2 pitch, south of ditto, by four men, at 5s. per ton, is worth 1 ton per fm. No. 3 pitch, south of ditto, by four men, at 5s. per ton, is worth 1 ton per fm. No. 4 pitch in ditto, by two men, at 5s. 5s. per fathom, is worth ¾ ton per fm. Pitch in bottom of the 63 south, by two men, at 5s. 10s. per fathom, is worth ¾ ton per fathom. Pitch in bottom of 50 north, by three men, at 5s. per ton, is worth 1½ ton per fathom. Pitch in bottom of 50, south of shaft, by two men, at 10s. per ton, is worth 12 cwt. per fathom. Pitch in bottom of 46, by two men, at 5s. 10s. per ton, is worth 12 cwt. per fathom. Pitch in bottom of the 20 south, by two men, at 5s. 5s. per ton, is worth ¾ ton per fathom. We have to-day sampled 25 tons lead ore and 20 tons of blende for sale next week.

**EAST WHEEL LOVELL.**—R. Quentrell, Nov. 12: We are making good progress with the sinking of Sevorgan shaft, and the lode continues of a highly favourable character. We have nearly finished the wheel-pit, and shall be fixing the water-wheel next week.

**GAULTON COPPER.**—George Rowe, George Rowe, Jun., Nov. 8: The lode in the 117 east of cross-cut, is carried 6 ft. wide, producing capel and spar, speckled with blende, and a little lead. The lode in the 105 east is carried 6 ft. wide, yielding 4 tons of arsenical mundie, mixed with ore. The lode in the stope in the bottom of the 105 fm. level, east of winze, is worth 8s. per fathom. The lode in the stope in the bottom of the same level (105), west of said winze, is worth 11s. per fathom. The lode in the stope in the back of the 105 is worth 10s. per fathom. The lode in the stope in the bottom of the 95 is worth 6s. per fathom. All other points are without change.

**GLASGOW CARADON CONSOLS.**—Wm. Taylor, William J. Taylor, Nov. 11: In the 102 south we have cut a new lode, 2 ft. wide, chiefly composed of peach ore, and containing a very kindly looking lode, and letting out water freely. We have commenced to open east on it, and in a few days shall see more of it; the ground about it is favourable. The 102 east, on the north lode, is letting out a little more water, which has further drained the winze before this end, in the bottom of the 90; we have resumed the sinking; the lode is worth 10s. per fm. The end under has not struck the ore yet. In the 90 west, on the north lode, the ground is still hard, and no lode taken down since last reported on. The 90 east, on the south lode, has opened abroad, and improved lately to 10s. per fathom, but it is not looking so well now, worth about 5s. per fathom; we hope it will improve again soon. In cross-cutting south in this level we are meeting with strings of ore, which may be near a lode, but the ground is still hard. The tribute pitches are not looking quite so well. The stopes, on the whole, are turning out about their usual quantities of ore, varying in value from 10s. to 20s. per fm. We sampled yesterday (computed) 160 tons of copper ore, which will be sold on the 20th inst.

**GLENROY.**—R. Rowe, Nov. 12: I am glad to be able to report an improvement in the bottom level south which has taken place this week; the lode is still 4 ft. wide, and on the footwall there is now come in a sparry course, mixed with blende, about 2 ft. wide, and bursting with water—it is at this moment quite a change for the better. In the north end the lode is about 3½ ft. wide, containing a little blende and copper.

**GORSIEDD AND MERLLYN.**—W. Edwards, Nov. 13: The 70 east level has advanced over 2 yards since last report, but the ground has become very stiff for driving, although the lead obtained therefrom continues in the same quantity as before, very hard, but of a rich nature. The tributaries are doing better. I have got six men sinking a stope from the 80, which will be completed this week. The only change in the 90 is that the beds are dipping east very much, a sign that we are approaching the run of ore ground above. We are very dressing lead.

**GREAT HOLYAU.**—Nov. 13: The lode in the 125 east is very much improved, and the work on tribute when the mine was suspended asking to be allowed to take contracts on the same principle. This speaks well for the future, and I am more fully convinced from my further knowledge of the property that when developed, and the junction of granite and killas reached, great success will attend the undertaking.

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**FANORA.**—H. Nottingham, Nov. 13: I have nothing new to report from underground, the productive bargains being equal in value to last week's report, and all work is being carried on with regularity. Strange to say for this time of year we are, with the rest, beginning to feel the want of more water, and cannot drive our dressing machinery as fast as we ought to without discontinuing the flat-roads, and putting the engine to pump; this I am unwilling to do, seeing that the weather has become unsettled, and a day's rain would save us this trouble and expense, but a few days will decide. Invoice of new crusher rolls is to hand, and I intend putting them in as soon as they arrive here.

**FARIS.**—T. Mitchell, Nov. 12: The 90 cross-cut south is still intermixed with sulphur and strong patches of copper ore. Although the ground is hard, it is a kind of rock that associates with bunches of copper in this neighbourhood, and we think we are not far from something better than we have hitherto seen in this level. The ground in the 90, west of cross-cut, continues much the same as when last reported—moderately easy for driving, and looks kindly. The pitches are looking very well, and yielding good quantities of ore. We are busy clearing up the precipitation pits, and hope to have the precipitate ready for sampling with a parcel of copper ore about the middle of next month.

**FATELEY BRIDGE.**—David Williams, Nov. 13: The 40 north-west extended from shaft 13 fms. 5 ft.; the vein in the present forebore is strong and massive, being from 10 to 11 ft. in width, and producing more or less ore throughout; worth fully  $\frac{1}{2}$  tons per fathom. The 40 east on same vein has been extended 11 fms. in a strong and promising vein, producing about 2 tons of lead ore per fathom for the whole distance driven, and now in the end of the same value. I look forward for a great improvement in this level soon. The 30 east on Rake vein has been driven during the month little over 4 fms. in a vein 5 to 6 feet in width, consisting of quartz, carbonate of lime, gossan, and tumbled lead ore; a very promising lode, and likely to become highly remunerative. The 30 north-west on Fielding's vein and branches have been driven little over 2 fms., the appearances in the forebore are most favourable, and I feel confident that we shall cut into rich ground here soon. The metal pitch in Fielding's vein in the 20 north-west is still worth  $\frac{1}{2}$  ton of lead ore per fathom. The other points are without material change.

**PENHALLS.**—S. Bennetts, P. Vian: The lode in the 70 east end is not quite so productive as it was last week, and at present is worth 5l. per fathom. The stope in the back of this level are without much change. The 48 west end is worth 5l. to 6l. per fathom. The rise and stope in the back of the 40 west have been let to tribute. Elsewhere there is no alteration worthy of notice.

**PENNANT.**—Nov. 13: The 60 west, and which is now being driven to get underneath the sump proved from the 40, is undergoing a great change, large lumps of solid blende are being met with, and there is no doubt in my mind but that we shall meet with a good body of metal here. All the stopes look well.

**RED ROCK.**—John Kitchin, Nov. 1: There has not been any change of importance in the 72 since the date of my last monthly report, and we are now rising in the back of this level to communicate with a winze which has been sunk below the 60 for ventilation, and hope to effect this communication in a few days from date. The 23, driving west from the new shaft, still improves in character, and we are almost upon the run of ore ground that we passed through in the 10 above, but the distance that we have yet to drive will depend upon whether the bunch of ore dips east or west, but the 23 end is now within 3 fathoms of its perpendicular. The 10 driving east, on the south part of the lode, is looking very kindly indeed, and contains good strings of lead. There is every reason to believe that this will prove to be the main part of the lode, and should this be the case it cannot fail to produce a favourable effect upon the future of the mine. I hope to sample another parcel of ore before the end of the current month.

**ROMAN GLAVES.**—W. R. Williams, Nov. 13: The new south engine-shaft will be down by next setting-day to the 125, and no delay will take place in opening out for plat and driving north and south on the lode at that depth. The 110 north is opening out a strong sparry lode, but we have not yet got into the productive ground seen south of the old engine-shaft. We shall get into this run of ore in due course. The 110 south is forth to where the lode underlays the contrary way—west instead of east—but we are now entering the ore ground; present value of the end being 1 ton per fathom. The 95 south is going forward in a splendid looking lode underlaying the contrary way, and worth 2½ to 3 tons per fathom. The 80 north is going forward in a lode 3 fms. wide (a perpendicular lode), the part carried being worth 2 tons per fathom. The 65 south is also into a point where the lode underlies the contrary way, and is worth 2½ tons per fms. The stopes generally are looking well, and yielding ore as for the last 12 months past. We have to-day sold 200 tons of lead ore for 236l. 5s.

**SOUTH CONDUROW.**—W. Rich, W. Williams, H. Abraham, Nov. 11: The lode in the 93 east is worth 10l. per fathom. The 80 east is worth 12l. per fathom for tin; there is little or no copper in the end at present. The 70 east end is worth 7l. per fathom. The 50, east of King's, is worth 9l. per fathom. The 40 east end is worth 8l. per fathom. We have begun to haul from the 70 at the Plantation shaft with steam-power; the men are now engaged fixing skip-road from the 70 to the 80. The lode in the 80 end west is smaller than usual, and is now worth 8l. per fathom. In the 70, west of Plantation, we have not yet got clear of the cross branches. The lode has a strong and kindly appearance, and is worth 9l. per fathom.

**SOUTH DAREN.**—Henry James, Nov. 13: We have commenced to drive the 110 east and west. In the west end the lode is large, worth for lead ore 1½ tons per fathom. We have not taken down all the lode in the eastern end, therefore cannot give its full value. There is a strong rib of lead ore worth 1 ton per fms. We shall be able to say more about this point next week. The 100 end is quite as good as reported last—worth 2½ tons per fathom. No change in the stope in this level. In the 90 end we have effected a communication with the 80 winze, and have cut into the lode about 18 in., which is very good, and will produce 1 ton of lead ore per fathom. We have to clear off some deads here, after which more lode will be taken down. Our setting and full report will be sent you next Thursday.

**SOUTH TOLCARNE.**—W. Rich, J. Knotwell, Nov. 11: The 36 cross-cut south is in congenial looking ground, and the cross-course on which the level is being driven has a kindly appearance. The flat tin lode is standing south, and we hope when intersected near this cross-course, it will be found to be productive. We hope to communicate the rise in the back of the 36 with the winze in three or four weeks time.

**TAMAR (Silver-Lead and Fluor-Spar).**—R. Goldsworthy, Nov. 13: Setting Report: To drive the 57 cross-cut east, by two men, at 6l. per fathom. To drive the 37 south, by four men, at 7l. 10s. per fathom; the lode has a very promising appearance, producing saving work for lead, and 3 tons of fluor-spar per fathom. To drive the 27 south, by four men, at 7l. 10s. per fathom; the lode is a good one, and the ground being easy for driving we purpose to push this out to get into more settled ground, and then cross-cut east to see if the main part of the lode is standing in that direction. Four tribute pitches to eight men—one in the back of the 57, and three in the back of the 37; each at 9l. per ton for silver-lead, 12s. per ton for best fluor-spar, and 6s. per ton for seconds.

**TANKERVILLE.**—A. Waters, Nov. 13: Setting Report: The 220 to drive east of Watson's shaft, by six men, at 9l. per fathom. The 220 west, by four men, at 10l. 10s. per fathom; worth 1 ton per fathom. The stope in back of said level east, by six men, at 5l. 10s. per fathom; worth 1½ tons per fathom. No. 2 stope east of ditto, by four men, at 5l. 10s. per fathom; worth 2½ tons per fathom. No. 3 stope east of ditto, by four men, at 5l. 10s. per fathom; worth 1½ tons per fathom. The 206 west, by four men, at 10l. 10s. per fathom; worth 1 ton per fathom. The 206 cross-cut north to prove lode, by four men, at 9l. per fathom. We expect to cut into ore ground here shortly. The stope in back of the 206 east, by four men, at 5l. 10s. per fathom; worth 2½ tons per fathom. No. 2 stope east, by four men, at 5l. 10s. per fathom; worth 1½ tons per fathom. No. 3 stope, by four men, at 5l. 10s. per fathom; worth 2 tons per fathom. No. 4 stope, by four men, at 5l. 10s. per fathom; worth 2 tons per fathom. The 162 east, by two men, at 8l. per fathom; a healthy lode yielding good quantities of ore, and the indications point to our near approach to the shale bunch of ore.—Pump Sump: Everything is now in good working order, and the lode in the present bottom (23 fms. below Boat level) is worth quite 3 tons per fathom; set to nine men, at 12l. per fathom. It has been said that Pennerley water flows into Pump Sump, but I say that our present feed will not supply a 2-in. pump, and is, therefore, practically nil. We could drive a cross-cut 100 fms. south from Pump Sump without the least possible chance of cutting down Pennerley water. The new shaft to command Pennerley level is down 7½ fms.; set to nine men, at 9l. per fms. We have commenced building a portable engine to go up on said new shaft, and hope to have the machine, winding-gear, &c., on the mine to-morrow. We have 16 pitches at work by 33 men, at tributes varying from 4l. to 5l. 10s. per ton.

**TEESDALE.**—Nov. 6: The west end forebore, though now standing, is about as promising looking a working as can be desired; it is almost a shame such a place should stand a day. The west stope No. 1 is improved very much since last week, and has been regularly good since the day I left; it is certainly richer than it has ever been before, and more evenly distributed the height of the working—12 feet. The No. 2 still looks though I think payable; they have not driven up to where the best lead ore is standing. There is no doubt to improve rapidly enough to make one feel justified to try it further up under the present circumstances, though it is a good trial.—East Branch: The upper portion, immediately under the Old Man, is turned very poor; there is payable ore lower down, and it is still good to work, and I think payable to continue for the present—they have got a lot of good strong blende. All the lead ore for the London Company is dressed, awaiting delivery; 18 bins have gone. They were intending having it all away by to-day, but I hear some misfortune has overtaken the cartmen; will commence loading the next parcel on Saturday.

**TEMPLE.**—Nov. 12: In driving No. 2 level west the lode presents very favourable indications of again becoming productive of lead of good quality and in remunerative quantity, although the produce is at present too irregular and insufficient to be valued in the usual manner. Some very fair specimens of ore are broken whenever the lode is taken down, and the matrix consists of quartz, carbonate of lime, and the other minerals which have invariably accompanied the lead ore in the richer portions of the lode hitherto explored. A constant and considerable stream of water is issuing from the end, which is now taking a direction slightly more to the north than for some months past. The general appearance of the lode indicates the near approach to a course of ore, and it is confidently expected that lead of value will be met with within the next few fathoms driving. The stope throughout the mine are yielding an average of 1 ton of lead ore per fathom. That in the back of No. 3 level is found to be extending further west than the ore was found in the level. At surface the 40-ft. water-wheel is erected, and the men are now erecting the drawing-machine and incline. The masons are building loading for the compressor. The weather is favourable.

**TYN-Y-FRON.**—E. Jones, Nov. 11: We have trammed the stuff from the stope east of the winze, where we rose up to the old workings. We have commenced in the second stope west of adit cross-cut, where we have a splendid mixture of lead and blende for about 4 ft. wide, and which we shall be able to place a proper value upon as its produce when we have opened upon it a little more.

**WEST ASHETON.**—J. Garland, Nov. 12: The 70 fm. level west was driven during the four weeks ending on Saturday last 4 fms. 5 ft. 8 in. The ground has become much easier for driving, and the lode, which is now 2 ft. wide, and composed of blende and mild quartz, with occasional strings of lead ore, is more like our ore-bearing rock. Hunt's cross-cut, in the 60 west, was driven 3 fms. 2 ft. 11 in., the total length now being 6 fms. 1 ft. 3 in. Except that the ground is slightly harder there is no change to notice. The driving of the 60 west will now be resumed on the north or hanging side of the lode. A new tribute pitch, a few fathoms behind the end, is turning out very well. Two pitches in the back of the 50 are yielding well, in one of which there is a lode worth 1 ton, and in the other 2 to 3 tons of lead ore per fathom. The 40 west was driven 2 fms. 2 ft. 9 in.; the lode is about 1 ft. wide, and in the last few feet has yielded good

stones of lead ore. The lode in No. 2 stope (back of 40 west) has improved throughout the whole length of the stope—7½ fms.—and now yields 2½ tons per fathom. A pitch in the back of the level at the foot of the west of boundary cross-cut is yielding ore in paying quantity. The 30, east of footway rise, was driven 5 fms. 1 ft. 9 in.; the lode is 2½ ft. wide, and unproductive. The 30, west of footway rise, was driven 5 fms. 0 ft. 11 in.; the lode, which is valuable throughout, is 2 ft. wide, and has increased in productiveness from  $\frac{1}{2}$  ton to 3 tons per fathom. No. 2 stope, above referred to, is a few fathoms west of this end, which is, therefore, going forward on a good course of ore. We have not yet finished dressing last month's lead ore, but we expect to sample over 50 tons on Wednesday next. Last Wednesday we sampled, for sale to-morrow, 60 tons of blende.

**WEST CHIVERTON.**—R. Southey, Wm. Roberts, J. Moyle, Nov. 13: Batter's Shaft: The lode in the 170, west of shaft, is 2½ ft. wide, producing good stones of lead ore, but not to value. In the 160, east of shaft, the lode is 2 ft. wide, at present unproductive, being disordered by a small cross-course. The lode in the 160, west of shaft, is 2½ ft. wide, of very promising nature, and worth for lead ore 5l. per fathom. In the 160, east of cross-cut, west of shaft, the lode is 4 ft. wide, worth for lead and blende 8l. per fathom. In the 150, east of the shaft, the lode is 3 ft. wide, worth for lead and blende 10l. per fathom.—Hawke's Shaft: The lode in the 140, west of shaft, is 4 ft. wide, worth for lead and blende 5l. per fathom. In the 140, east of shaft, the lode is 2½ ft. wide, producing good stones of lead ore occasionally. In the 110, west of the cross-cut, from the shaft, the lode is 3 ft. wide, worth for lead and blende 5l. per fathom. In the 70 cross-cut, south of the shaft, the ground still continues congenial for the production of mineral, and is letting out a considerable quantity of water, but no lode or branch has been intersected since our last report.

**WEST HOLWAY.**—R. Rowlands, Nov. 13: We are making excellent progress, and shall very shortly finish the shaft, which when accomplished will be permanent and substantial, and enable us to draw the stuff to surface most economically.

**WEST PATELEY BRIDGE.**—David Williams, Nov. 13: The 67 north-west is extended from shaft 30 fms. 3 ft.; the vein here has become easier to work, very porous, and letting out water freely, and better progress is being made than for some time past. A stope in back of level is worth 12 cwt. of lead ore per fm. The 67 south-east has been extended 27 fms. 3 ft. from shaft, in a vein 3 ft. wide, composed of spar, barytes, and branches of lead ore, being saving work for dressing of good quality. The 55 north-west upon the new vein is extended from shaft 44 fm. 3 ft.; as anticipated in my former letters, after passing through the severest nip we have experienced since the commencement of the ore body, the vein here has become as wide and as rich as ever—at present it is upwards of 2 ft. wide, with well-defined walls, and filled with gossan branches and boulders of galena of excellent quality; worth fully 3 tons per fathom. We have two stopes in back of level, worth respectively 1½ and 2 tons per fathom. A stope in back of 50 upon new vein is worth 1 ton of ore per fathom. The cross-cut south to the parallel veins, driven by Cranston's drills, is in from the main level 41 fms. In the 41 we have passed through a small branch of spar with spots of ore; the general appearance of the time rocks indicate that we are close to the first of the series of parallel veins. The north cross-cut is in 30 fms. 1 ft. Other points as last advised. Dressing, &c., progressing favourably.

**WEST TOLGUS.**—Nov. 13: Taylor's Shaft: In the 155, west of shaft, we have intersected the little cross-course in this level, and have discovered the lode again on the other side, where it is 5 ft. wide, containing a large quantity of white iron and some good stones of copper ore. In the 145 cross-cut, driving south to the west of shaft, the ground is a little harder than it was just over this place in the 135. In the 135 cross-cut, driving south, we have not yet intersected the lode, but are expected to have done so by this time, judging from its underlie in the winze in the level above the 175, driving south part of the lode, the lode is 4 ft. wide, yielding 2½ tons of ore per fathom. The lode in the 125 west, on the south part of the lode, is 3½ ft. wide, and yielding 1 ton of ore per fathom. The lode in the winze under the 125, on the south part, is 4 ft. wide, yielding 1 ton of ore per fathom. This winze is down 3½ fms., and is underlying north about 2 ft. in a fathom, which is much faster than when commenced. In the stope in back of the 155, west of shaft, west of No. 1 winze, the lode is 3 ft. wide, yielding 3 tons of ore per fathom, worth 18l. per fm. In the stope in back of the 155, east of No. 1 winze, the lode is 2½ ft. wide, yielding 2 tons of ore per fathom, worth 12l. per fathom. In the stope in back of the 155, west of shaft, east of No. 2 winze, the lode is 4 ft. wide, yielding 2½ tons of ore per fathom, worth 15l. per fathom. In the stope in back of the 145, west of shaft, east of No. 4 winze, the lode is 3 ft. wide, yielding 2 tons of ore per fm., worth 12l. per fathom. In the stope in back of the 145, west of shaft, east of No. 1 winze, the lode is 4 ft. wide, yielding 2½ tons of ore per fathom, worth 15l. per fathom. In the stope in back of the 245, west of shaft, west of No. 4 winze, the lode is 3 ft. wide, yielding 2 tons of ore per fathom, worth 12l. per fathom. In the stope in back of the 135, west of shaft, west of No. 4 winze, the lode is 4 ft. wide, yielding 2 tons of ore per fathom, worth 18l. per fathom. In the stope in back of the 125, west of shaft, on the south part of the lode, the lode is 5 ft. wide, yielding 3½ tons of ore per fathom, worth 21l. per fathom. No. 2 winze, under the 145, is communicated to the 155.—Richard's Shaft: The lode in the 95, west of shaft, is 2 ft. wide, very sparry, and unproductive. The lode in the 65, west of shaft, is 3 ft. wide, with very regular walls, and composed of spar and peach, but no ore so value. We shall sample on Tuesday next about 250 tons of copper ore.

**WEST WEALE PEEVOR.**—W. T. White, Nov. 10: The sinking of Mitchell's engine-shaft is now completed to the 35, and to-day the men are set to cross-cut to the lode at that depth. The cross-cut is to be driven by six men 10 fms. certain or cut the lode, at 7l. per fathom, that being about the distance we expect to intersect it. This will be looked forward to with great expectation, being a very important point, and judging from the ground generally, and the run of the branches with the lode as seen in the 25, I believe a profitable lode will be met with. The lode in the winze sinking below the 25 is without change since last reported. This winze will be down to the 35 just about the time the cross-cut started at that level, when communication will at once be effected and stopping ground made available. I cannot speak of any alteration in the lode in the 25 west. It still continues to be productive. The men are still engaged in timbering up the trial shaft, which we hope to complete this week, when sinking will at once be resumed.

**WHEAL CREBOR.**—John Andrews, Nov. 11: The lode at the 120, east of cross-cut is still worth 80l. per fathom. West of cross-cut at the same level it is worth 70l. per fathom. There is no change in the 108 east. The lode in the stope in the back of the 108 is worth 104l. per fathom. The new lode to the 108, east of cross-cut, has declined a little in value during the past week, and is now worth 55l. per fathom. The stope in back of the 108 is worth 40l. per fathom. There is no change in the 48 cross-cut south, nor in the new shaft.

**WHEAL CREBOR.**—John Andrews, Nov. 13: There is little or no change in the mine since I wrote you last, but every point is looking equally as well as reported on Tuesday.

**WHEAL GRENVILLE.**—T. Hodge, Nov. 12: Gould's shaft is going down below the 165 with fair speed. The lode in the 165 east end is improving as we extend. The rise in back of said level is up over 5 fms., the lode in which is worth 8l. per fathom. The 150 east end is worth 8l. per fathom; the lode is letting out much water. The rise in back of said level is worth 8l. per fm. The 140 east end is worth 10l. per fm. No other change.

**WHEAL JANE.**—R. Southey, Nov. 13: The progress made here during the past month is very satisfactory. A new 12-in. engine is being put in to drive the stonebreaker in place of a 9-in., which was taken out to work the jigger, which will be ready on or about the end of the week; meanwhile a third jigger is being erected, which we consider to be quite sufficient to treat all the mineral from 80 heads with ease. An additional 12-head stamps will shortly set to work on rough and burnt leavings. Underground operations much as usual. A large section of the level being laid open, which can be taken away at a cheap rate when the rise in the back of the shallow level is communicated with the stope. This we hope to accomplish in about two months from the present date.

**WHEAL PEEVOR.**—W. T. White, J. Pryor, Nov. 10: Good progress is being made in sinking the engine-shaft below 80. The lode in each of the ends driving west—the 80, 70, 60, 48, 36, and 26—are without change, all of which are looking well. The rise in the back of the 36, which is now up above the 26, still holds good and maintains its former value—40l. per fathom. This is a most important point, being some distance in advance of the 26 end. The stope and tribute pitches continue to produce their usual quantity. We shall be in a position next week to open the old sump shaft, which will be our future drawing shaft for our eastern ground, thus enabling us to commence operations in this most valuable part of the mine. We are making satisfactory progress in the erecting of the additional 16 heads of stamps and the extension of the dressing floors.

**WHEAL RUSSELL.**—John Bray, Nov. 13: I am very pleased to say the lode in the 55 is still improving in size and character, and worth near 1 ton of good copper ore per fathom. The lode in the rise above this level is from 3 ft. to 4 ft. wide, producing a little copper ore not sufficient to value, but looking very promising.

**WHEAL UNY.**—Wm. Rich, Matthew Rogers, Nov. 10: The south part of the lode in the 130 west is very hard and tedious for cutting through; so far as yet seen, it is not very productive for tin. The 130 end, east of King's, has a kindly appearance, and yields good stones of tin. In the 160 end, east of Gooding's, there is an increase of water, coming from the north side of the level. We have set the men to put out a cross-cut north to prove whether the main part of the lode is standing in that direction. The 160, west of incline shaft, is worth 9l. per fathom. The 172 end west is poor. The stope in the back of this level is worth 10l. per fathom. The 172 end east is in easy ground, but the lode is unproductive. There is nothing new in the 172 cross-cut south.

#### VAN MINE—MONTHLY REPORT.

Nov. 13.—As under we beg to forward our monthly report upon this mine:—In the 120 west we are crossing to reach the bottom of the winze from the 105, and, as stated in our report of Oct. 15, as soon as this communication is effected we shall cross-cut to prove the value of the lode. The 105 west is looking well, now producing 2½ tons of lead ore per cubic fathom. The stope in the back of this level—the 100 and 90—are on the average 14 ft. wide, worth 38 cwt. of lead ore per cubic fathom. At the intermediate level, in the back of the 105 west, the lode is worth 10 cwt. of lead ore per cubic fathom. The 150 winze, sinking below the 90 west, is down 9 fathoms. The stope in the back of the 90 (five in number) are worth on the average 1½ tons of lead ore per cubic fathom; mean width 21 ft. 8 in. The stope in the back of the 75 (four in number) are worth on the average 21 cwt. of lead ore per cubic fathom; mean width 19 ft. The stope in the back of the 60 (four in number) are worth 21 cwt. of lead ore per cubic fathom; average width 13 ft. 6 in. The cross-cut south, in the 30 west, is driven 6 fathoms, but as yet nothing of importance has been discovered. At Edwards' shaft we are crossing south to get under the perpendicular of the shaft in the 45 in order to ride against it.—Surface: Surface work is progressing satisfactorily. Our monthly sale to-day comprises 200 tons of lead ore and 150 tons of blende. The dressing is going on regularly, and the machinery is in good working order.—W. H. WILLIAMS.

**INCREASE IN THE VALUE OF SHIPPING PROPERTIES.**—The iron ship Hooghly, 1300 tons register, built in 1868 and classed A 1 at Lloyd's, was on Thursday offered at auction by Messrs. C. W. Kellock and Co., of Liverpool. The first bid was 8000l., and after a sharp competition

she was sold for 9900l., which is a considerable improvement on the value of the same vessel two months ago.

#### MARKET ECHOES, AND MINING MATTERS.

Although for the moment the rise in tin has been checked, a very large business continues to be done every account in mining shares. Investors are now commencing steadily to buy, and any mine that appears to be selling cheaply on the market, and whose prospects are fairly good—although its merits may have been overlooked for many months past—is now sought after, and the shares taken off the market, at steadily enhancing quotations. This is especially the case with the very low-priced shares—those selling at a few shillings each; and within the past fortnight two or three of this class, and it is not a numerous one, have risen cent. per cent., and yet even now are scarcely above 10s. per share. Prominent amongst such shares have been the Pestarena (Gold), which from 3s. 6d. to 4s. 6d. a fortnight ago have advanced to double that price, and are now in active demand. Many have expressed surprise that the shares have been so long neglected, for the mines are in full and profitable work, and under most able management. What has weighed down the price, however, has been the debt of about 20,000l., and the preference capital of 32,000l. It is hoped that now the debt may be reduced, as the net profit for the nine months ending June last was nearly 3000l., on a yield of gold to the value of 15,000l., against the same amount of profit on a yield of gold to the value of 17,000l. for the preceding twelve months. The property is, therefore, increasing in yield and profit. Anyone studying the accounts could see at a glance that at 3s. 6d. to 4s. 6d. the risk in purchasing the shares (which, by-the-by, are 3l. fully-paid) was reduced to a minimum, whilst the chances of a rise were very great in the present buoyant state of the market. This, indeed, was the one remaining factor required for a rise—a better mining market. It has been created by the general improvement in metals, and shares have doubled in value.

There is another cheap gold mine on the market selling under 10s., and that is Javali. In this company the financial position is better than Pestarena, and it is a well-managed concern also. The shares should be looked after by investors. Owing to the firmness of lead there is a steadily growing demand for lead shares, and prices are remarkably firm. It is said on good authority that lead will certainly be much higher in the spring of next year, and it is difficult to see what there is to prevent an early rise to 20l. in the metal. Therefore, an investment in sound lead shares should show very satisfactory results in six months time, and if only a discriminating selection is made by the investor the chances of loss are very small compared to those of a substantial rise. In our own opinion the rise in lead shares has scarcely even commenced.

A word about tin. Although just now the market for that metal is lower the trade prospects are moderately good. It is as well that the late advance was checked, for the price, owing to enormous speculation, was being forced up too quickly. We have good grounds for believing in a rise from present prices, although there is a pretty certain prospect of fluctuations. But the demand is steadily increasing, and with this expansion must come a better price for the metal. What Cornish miners want is a steady advance, and it seems likely they will have it. It is, perhaps, almost a trite subject now to decant upon the genuineness of the revival in trade, but every additional evidence of the fact is to be welcomed. It is satisfactory, therefore, to hear that the total increase in the earnings of eighteen of our principal railways for the past week was 30,500l., as compared with the corresponding week last year, and that as compared with the same period in 1877, when the trade depression was still far from its worst, the total increase was 27,000l. In America the revival has spread to almost every kind of market; and, as the President of the Manchester Statistical Society said this week, it must be borne in mind that although the recovery has been sudden in this country it has been very deliberate in America, where the materials for a complete restoration of confidence have been for a long time past accumulating. And now the general revival has reached our shores.

JAMES H. CROFTS.

#### INVESTMENT NOTES.

The fortnightly settlement has passed off satisfactorily, but has curtailed fresh transactions. There is somewhat of a lull in the tin market; but while the price remains at 50l. per ton good profits can be made, and it is rather to be hoped that this figure will be steadily maintained than that there should be a rapid and speculative advance, to be followed by a sudden reaction. Lead keeps firm, and a better price even will be obtained in a few months. This is almost an absolute certainty. The ministerial speeches at the Guildhall were very reassuring as to the future of trade and commerce, and the opinion of so high an authority as the British Government on such a subject may well be relied on. With the imminent advance in lead investors would, therefore, do well to give greater attention to lead mines. A selection of shares may be made, all of which will probably be higher in a short time; at any rate, by dividing the risk in (say) half-a-dozen mines, the outlay is sure to result in profit in some of them. A purchase might be made in Roman Gravel, Leadhills, Herodsfoot, Pandora, D'Ereby Mountain, D'Ereby Consols, and North D'Ereby Mountain. The last three mines are likely to attract considerable notice in a very short time. There has been a good business done in D'Ereby Mountain and North D'Ereby Mountain shares. The latter mine never looked better, and some fine lead ground is being opened up in No. 2 adit level—at present shares can be bought at 20s. each fully paid; but, considering the bright prospects and almost unexplored facilities for developing and working the mine, the shares will not probably be obtainable at such a cheap price much longer.

In copper mines Crebor, Faris, and East Crebor are capital speculations for an important rise.

The Stock Exchange markets have again been very buoyant.

Old Broad-street, Nov. 14. ALFRED E. COOKE.

#### THE WEEK.

SATURDAY, NOV. 8.—Home railways opened flat, and mostly left off at a substantial decline. York, A. receded quite 2, closing 12½ to 122. Many accounts were closed from fear of prices being worse on Monday, which is the last day of the present account, also Lord Mayor's Day. Brighton, A. fluctuated between 129½ and 130½, finally closing 130½. Monday's traffic is expected to be good. East London Debentures were in strong demand in expectation of some arrangement being made shortly for the payment of arrears of interest. The rise averaged from 2 to 3l. Nearly all American securities were lower. Illinois Central fell to 100. Atlantic Leased Bonds, 1873, receded 2, closing 29½ to 30½. In mining shares considerable business was done in Flagstaff. Early in the day shares were firm at 1½, but ultimately declined to 1.

MONDAY.—The markets were steadier than they have been for the last two or three days, no heavy selling being attempted. Midland, York, A., and Great Western all closed from ¾ to 1 higher. The American market was favourably affected by the fall in New York of the discount rate from 7 per cent. to 4½ per cent. Atlantic and Great Western Second Mortgage and Leased Lines, 1873, both closed 1 better, while the advance in the First Mortgage was as much as ¼. Reading shares rose to 83½. In mining shares a rather large business was done. Pestarena shares were in active demand, advancing to 8s. 8d. At first Flagstaff were dull at 1½, but being largely bid for rallied to 1¾, 1½. The revenue account of the New Quebec Company issued to-day shows a deficit of nearly 3000l.

TUESDAY.—Home railways opened firm, and in the afternoon when the bulk of the stocks had been carried over, they went up with a rush. Brighton, A., ran up from 130½ to 133; York, A., from 122½ to 124; and Midland from 134 to 136. North-Eastern was a very firm market, and after being dealt in at 144½, finally closed at 146½. The contingents charged were very stiff, accordingly all the rise registered was not cash profit to the operator. In Midland, North-Eastern, Great Western, and Dover, A., this change amounted to quite ¾ per cent., being equivalent to quite 6l. 5s. per 1000l. stock. Atlantic and Great Western securities were in favour again, the First and Second Mortgage advancing 1½.

WEDNESDAY.—There was a general rise in railways, but a large part of it was lost in the afternoon, owing to a large withdrawal of bullion encouraging sales. American railways were particularly firm, and maintained their ground all day. Some of the changes were simply marvellous. Erie 2nd Mortgage rose as much as 4, the 1st Mortgage 2, and the shares 82½. Atlantic and Great Western 1st and 2nd Mortgage both closed 1 better. Philadelphia and Reading shares were particularly strong, and touched 83½.

THURSDAY.—Holders of home railways have found the account just concluded too nearly as much for them as the famous mid-October one. Last account Brighton, A., were continued at 124, and this time at 130½. In York, A., the advance has been even greater—from 118½ to 123½, business in the course of the account having been done at 128. Great Western have advanced from 109 to 111½, Metropolitan from 119½ to 122, and District from 77½ to 82½. In Midland the advance has been from 130½ to 134. To-day, owing to the settlement, home railways were hardly so much dealt in. Brighton, A. fluctuated between 123½ and 122½. British and Caledonian rose nearly 1l. Erie and Atlantic were buoyant and higher. Great Western of Canada touched 12.

FRIDAY (Opening).—The markets are inclined to be dull. Brighton, A. are only 132½, and Dover, A. 118½, Great Western being 111½, and Great Eastern 59½. Erie shares have fallen 8½, and the Second Mortgage 1l. (92 to 93). Great Western of Canada are buoyant, and up to 12½. North British steady, and in demand at 78½. A rather severe fall has taken place in Atlantic and Great Western Securities; the First Mortgage are down ¾, and the Second ½. In mining shares there is some strong bidding for Flagstaff, and they are quoted 1½ to 1½. Pestarena and New Zealand Kapanga are in demand at 10s. 11½ to 11½; Unifield, 46½ to 47½. Four o'clock.—Brighton A. have rallied, and are now 133½ to 134, but most other stocks are lower. A further serious drop has taken place in Atlantic and Great Western bonds; the First Mortgage from being 56 are now quoted 52½ to 53, the Second being 24½ to 25, and the Leased Bonds, 1873, 29 to 30. Foreign bonds are all dull. Hungarian Gold and Egyptian Unified are ¾ down. East Canada, 2½ to 3; Tinan, 14½ to 15; Tankerville, 5½ to 5½; Last Chance, 1 to 1½; New Quebec, 3½ to 3½; Nouveau Monde, ¾ to ¾; Panuco, 3½ to 4½; Odessa Water-works, A. 6 to 7; St. Petersburg, 2½ to 3.—Four o'clock.—All the markets closed extremely flat. Brighton, A. fell to 132½, North British dropped 2l. below the best point touched, Egyptian Unified receded to 46, and Hungarian Gold to 81½. Dover, A. 117½ to 117½; York, A. 121½ to 121½. Atlantic closed slightly above the lowest touched. Illinois closed firm at an improvement, Erie gave way rather, and Readings were unchanged



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### The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, NOV. 14, 1879.

IRON.	£ s. d.	£ s. d.	TIN.	£ s. d.	£ s. d.
Pig, 60 lb., f.o.b., Clyde.	2 15 3	2 15 6	English, ingot, f.o.b.	(nominal)	
" " " " " " " "	2 17 0	3 5 0	" " " " " " " "		
Bars, Welsh, f.o.b., Wales.	5 15 0	6 0 0	" " " " " " " "		
" " " " " " " "	6 10 0		Australian	92 0 0	(nom.)
" " " " " " " "	7 0 0	7 15 0	Banca	94 0 0	
" " " " " " " "	6 5 0		Straits	92 0 0	
" " " " " " " "	6 5 0				
" " " " " " " "	9 10 0		COPPER.		
Rails, Welsh, at works	6 0 0		Tough cake and ingot.	70 0 0	
Sheets, Staff., in London	10 0 0	9 10 0	Best selected	71 0 0	73 0 0
Plates, Staff., in London	6 10 0	7 0 0	Sheets and sheathing	74 10 0	75 0 0
Hoops, Staff., in London	7 10 0		Flat Bottoms	78 0 0	79 0 0
Nail rods, Staff., in Lon.	7 0 0	7 10 0	Wallaroo	73 0 0	74 0 0
			Other brands	70 0 0	72 0 0
STEEL.			Chill bars, g.o.b.	64 10 0	
English, spring	13 0 0	19 0 0			
" " " " " " " "	30 0 0	40 0 0	PHOSPHOR BRONZE.		
Swedish, keg	13 0 0		Alloys I., II., III., and IV.	£115 0 0	
" " " " " " " "	15 0 0		" " " " " " " "	130 0 0	
LEAD.			" " " " " " " "	110 0 0	
English, pig, common	17 0 0		BRASS.		
" " " " " " " "	2 6 17	5 0	Wire	7 1/2 d.	
" " " " " " " "	15 0 0		Tubes	9	
" " " " " " " "	18 0 0		Sheets	8 1/2 d.	
" " " " " " " "	18 0 0	18 10 0	Yel. met. sheath. & sheets	8 1/2 d.	
" " " " " " " "	28 0 0	29 0 0			
" " " " " " " "	19 0 0		TIN-PLATES.		
Spanish	16 15 0		Charcoal, 1st quality	1 8 0	(nom.)
			" " " " " " " "	1 6 0	
NICKEL.			Coke, 1st quality	1 4 0	1 5 0
Metal, per cwt.	15 0 0	16 0 0	" " " " " " " "	1 3 0	1 4 0
Ore, 10 per cent. iron	20 0 0	25 0 0	Black, 1st quality	17 10 0	
QUICKSILVER.			" " " " " " " "	12 0 0	
Flasks, 75 lbs., w.f. (nom.)	7 5 0		Canada, Staff., or Gla.	12 0 0	
SPELTER.			at Liverpool	30 0 0	
Silesian	19 10 0	19 15 0	Black Taggers, 450 of	30 0 0	
English, Swansea	19 0 0		14 x 10		
Sheet zinc	24 0 0	25 0 0			

\* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than 10 quoted above, and add 6s. for each X. Tern-plates 2s. per box below tin-plates of similar brands.

**REMARKS.**—The falling due of prompts induces discreet speculators to close up their operations as speedily as possible, and thus, owing to there being some little eagerness displayed to realize, the markets become momentarily depressed. The stiffening of the money market is, doubtless, the reason of speculators adopting this course, rather than be subject to higher rates of interest and the risk of depreciation, which usually accompanies a rise in the Bank rate. The prospects of the metal trade have been somewhat marred by excessive speculation, although a slight recovery of a *bona fide* character has recently taken place, but in comparison with the amount of speculation it is but trifling. Had the markets been left to take their natural course, the revival would probably have led to a considerable business, but speculation setting in so early spoils it to a very great extent, and it is now necessary that some reaction should occur in order that prices may be properly adjusted. The advances have been effected too suddenly, and too fast to render them durable and safe, and, consequently, buyers have no confidence in the advance. The interests of speculators, as well as consumers and others, will be best promoted by a few moderate concessions. It is never advisable to maintain prices for any length of time when regular business is falling off; and if sellers decline to meet buyers' limits in a reasonable manner, it more often than not happens that orders are only renewed at lower rates than what they might have been previously secured at. The Board of Trade returns for last month are satisfactory, inasmuch as they show that a good increase has taken place in both the quantities and values of the exports of various metals, more particularly, however, in iron and steel. The total quantity shipped in October amounted to 43,373 tons, against 218,681 tons, and the value 2,071,563l., against 1,693,252l. The state of the country at the present time was very clearly described by Mr. Cowen in his speech at Newcastle last Saturday. He first touched upon the great increase in the expenditure and taxation augmented by the Ministry during a time of widespread social distress and unparalleled commercial stagnation. He then pointed out that it was folly ignoring realities when they tell against us, and that there was nothing to be gained from attempting to draw hopeful auguries from unfavourable conditions; and afterwards he went on to state that there was, however, no necessity for depression, and certainly none for despondency. These representations undoubtedly contain a truthful state of the political, financial, agricultural, and commercial state of affairs of England, and we cannot but think that under present circumstances it is absolutely necessary to consolidate our strength, and not to be carried away by any speculative ideas. By judicious management there is a fair prospect of trade improving; but we must all be prepared to make liberal concessions until it is firmly established.

The harvest this year has been the worst known since 1816. Our wheat requirements are said to be 23-23rd million quarters up to the end of August, 1880, whereas the yield of the United Kingdom this year is estimated to be about 5 million quarters for consumption, leaving 18-3rd million quarters to be supplied from foreign sources. Large sums of money will therefore be wanted to pay for foreign corn, and the drain of gold has already begun. This must inevitably lead to drain money, and it behoves every one to husband their resources as much as possible, and reduce their liabilities to a minimum. Speculation at such a time is only calculated to lead us out of our depth, and involve us in an immense amount of trouble and anxiety. Quietude in the long run will prove the best restorative.

**COPPER.**—During the past week the market has been rather quiet, but fairly steady considering the general position of affairs. Prices have slightly turned in buyers' favour, and the prospect of dearer money alone will probably increase that tendency. Our remarks upon this metal lately have been considered strong, but they are not any stronger than we intended, as we entertain a very decided opinion upon the recent changes in our market and the effect they will produce. We can quite understand that certain representations appear somewhat annoyed on finding the market represented in its true light, but it is not in our power to alter facts, and all that we have stated is, that the market, to a large extent, is speculative, and that the rise was chiefly effected by speculation; but we now go a step further, and unhesitatingly declare that it is being upheld by speculation more than by the legitimate demand. Every one is free to enjoy and express his own opinion, and we see no reason to swerve from the opinion we have previously expressed, and shall still adhere to it whatever others may say to the contrary. We decline to publish wilful misrepresentations. Our views may be erroneous; nevertheless they are candid and honest, and the correctness of our previous reports ought to be sufficient guarantee of the genuineness of our present statements. We have always endeavoured to furnish accurate accounts of the state of the market, and we have no intention of ever deviating from that course. The interest and welfare of the trade at large demand our first consideration, and no under influences can be suffered to injure the legitimate business of regular buyers and sellers; at the same time general protection is extended to all with scrupulous impartiality. But to proceed, what is speculation doing for the market at the present time but checking the free course of regular trade, and creating that which is insecure and censured, and which must seriously endanger future business. The prices are fictitious, because they are elevated beyond their proper position, and no market is safe and sound which is unsupported by a real consumptive demand; and present orders from the Continent, India, and Birmingham, clearly prove the limited character of *bona fide* business. Manufactured sheets and Tellin metal sheets cannot be sold in any quantity unless sellers submit to a reduction in price. Manufacturers have, perhaps, gone as far as they are able, and, according to their own account, below what they ought to charge with Chili bars quoted so high.

Here, then, is an evidence of a serious impediment in the way of business. There is no want of stock; on the other hand there is a superfluity, for stocks for a long while have been and still are unusually heavy, but if held back for speculative purposes only create an artificial scarcity and prevent orders from India being executed and keep the Continental buyers and the Birmingham consumers out of the market. It is therefore perfectly evident that speculation just now is mischievous, and that the market cannot improve while it is so much disturbed and under the influence of speculators. Speculators have had a good time in obtaining

a rise in Chili bars from 53l. and they should be satisfied with the result already achieved, but if they persist in attempting more it will only tend to their own disadvantage and keep our market unsettled. There should be a pause in all speculative transactions, that an opportunity may be afforded to consumers and shippers to contribute if possible their support; but to secure this it will be necessary first for prices to recede. To show how difficult it is to effect sales on the Continent at the present time we actually hear of second-hand parcels of best select offering at the equivalent of about 69l. On Wednesday the price of goods declined to 64l. 5s., and on Thursday as low as 64l. was accepted; but the market slightly rallied towards the close. Wide differences in the quotations must be looked for now as dealers cannot be expected to lay back without having a great margin to provide against further probable reductions in price. The arrivals during the first part of this month are said to be only 200 tons, and the deliveries 600 tons. To-day business is reported in cash bars, 64l. 7s. 6d. to 10s. and 65l. 10s. forward.

**IRON.**—This market remains on the whole steady, and prices, though showing only little alteration, keep firm, owing to the increased demand for the raw material; a good sign is that speculation in this metal has to a considerable extent abated, and consequently prices are now regulated more by the legitimate demand than has lately been the case. Just at present we do not look for any material change in quotations unless speculation revives, for most makers are reported to have sufficient orders to be enabled to maintain present rates for some time longer, and there is nothing to justify the opinion that the *bona fide* demand will shortly so much increase as to permit of any further addition to the rise that has already taken place. It is thought by some that the ensuing spring trade will show a vast improvement. We will, however, as yet not venture to form an opinion of the state of the trade so far ahead, and can only express a hope that these buoyant expectations may not lead to disappointments. The market at Leeds is reported to continue in a moderately active condition, and most of the forges have sufficient work to keep the men well employed. The demand for some descriptions has become quieter, though boiler plates and general railway iron continue in good request. The Middlebrough market maintains its position, without much change taking place in prices. The shipments last week showed a great falling off upon those of the few previous weeks, but the decrease had little effect upon quotations, owing to the reduction of 18,700 tons in the total stock last month. The stock in Conall and Co.'s yards, however, is said to have still further increased by about 1100 tons since the commencement of the month. Manufacturers show little disposition to look for forward delivery, evidently preferring to wait and see what the future state of the trade will be. For early shipment No. 3 is quoted at 45s., and second-hand parcels about 3s. per ton less. The total deliveries from Middlebrough last week are estimated at about 10,775 tons, while to Scotland being only 2920 tons. The shipments, however, are expected shortly to recover themselves, as it is known that large quantities have yet to be shipped during the remainder of this year. The production will most likely be still further increased as two or three more furnaces are being blown in. The reports from many of the finished iron manufacturers are more satisfactory, and some of the largest mills are going full time, while others are being prepared for re-starting, and at the Britania Iron-Works it is stated that twenty puddling furnaces are being set at work. There is not very much change in prices, ship plates being quoted about 6l. 10s.; common bars at 6l. angles, 5l. 17s. 6d. to 6l.; and puddled bars at 4l. 2s. 6d. per ton; at which rates makers for the most part are firm.

The Sheffield market remains active, and many consumers, in anticipation of further rise, have been purchasing in large quantities at ruling quotations. Some makers are receiving good orders at an advance of as much as 30s. per ton. The Bessemer trade is brisk, the demand being large enough to keep the mills in activity for some long time to come. Engineering firms continue busy, and the output of wire is very fair. The manufactured trade is active, the inquiry for boiler and ship plates being very good at steadily advancing prices. The trade at Birmingham is rather unsettled, owing to the continuance of the strike amongst the cut-nails. The strike has caused an improved demand for unwrought nails, and the value of them has risen 10s. to 1l. per ton. A great part of the demand is said to be speculative, but that for consumption for both home and export purposes has considerably increased. The American demand keeps up to its average for some descriptions, and orders are placed at higher limits. The Welsh makers appear to be very hopeful of the future, and their reports are particularly satisfactory and encouraging character. More furnaces are being re-lit, and fresh works again started. The production is therefore increased, and manufacturers of finished iron are availing themselves of the present opportunity to demand higher rates. Clearances are reported to show no falling off, the chief of which continue to be made to America. There is no new feature of much importance to be noted from the Glasgow warrant market; a good business has been transacted between 51s. 6d. and 55s., the market closing to-day at

For week ending Nov. 8, 1879.....Tons 10,128

For week ending Nov. 9, 1879.....8,547

Increase.....1,581

Total increase for 1879.....145,552

Imports of Middlebrough pig-iron into Grangemouth:—

For week ending Nov. 8, 1879.....3,785

For week ending Nov. 9, 1879.....2,920

Decrease.....865

Total decrease for 1879.....28,413

IN BLAST NOV. 8, 1879.....91

In blast Nov. 9, 1879.....88

**TIN.**—The downward movement of this metal, which we reported in our last issue, continued until Wednesday, when fine foreign was quoted down to 89l. 10s.; but consumers and other buyers finding that tin was procurable again below 90l. came forward and showed a disposition to make purchases. This had the effect of reviving the activity of the market, and prices yesterday were quoted up to 90l. 10s., and to-day's price is 91l. to 92l. There have been a few large importations from Penang and Australia just lately, and this may have had the effect of damping the tone of the market, but when the recent rise is taken into account, too much stress should not be laid upon a temporary fall. In fact, when looking minutely into the actual state of the market, and seeing how firmly it has stood against the heavy quantities of both old and recent stocks which have been thrown upon it, we can only be the more deeply impressed with the opinion that the market remains in a most satisfactory condition, with a probability of still further improving.

**LEAD.**—This metal has slightly improved in value, and a moderate demand exists, consequently sellers are less inclined to press sales.

**SPELTER.**—The demand on the whole is limited, but consumers have been buying forward; prices are a little firmer for Silesian.

**STEEL.**—Rails are in good demand at 6l. per ton.

**TIN-PLATES.**—There is no material change, either in the demand or quotations. Some works in Wales, which for a long time past have remained idle, are expected shortly to be restarted.

**QUICKSILVER.**—The simultaneous arrival of two parcels, one from Austria and one from Spain, weakened the market, and caused the importers to accept 7l. The reduction led to free purchases, and this evening nothing can be had under 7l. 5s., the tendency at the close being favourable.

The settlement of the fortnightly account has again occupied the chief attention of the dealers in the MINING SHARE MARKET since our last, but it was not nearly so heavy as the previous account, and general business since has not been quite so brisk as it was. The mines chiefly dealt in have been Van, East Van, East Caradon, Wheel Crebor, D'Eresby Mountain, Aberllyn, West Ashton, Leadhills, South Frances, Wheel Peavor, Marke Valley, Grogwinion, and a few others.

**TIN.**—Although the standard has not further declined tin has been dull, and tin shares less firm, with scarcely any business doing until Friday, when the market somewhat revived for all kinds of shares. Botallack, 80 to 100; Carn Brea, 54 to 56; Cook's Kitchen, 34 to 36; Dolcoath, 54 to 56; East Lovell, 24 to 26; East Pool, 19 to 21; South Condurrow, 134 to 144; South Crofty, 6 to 7; South Frances, 114 to 116; Tincroft, 154 to 164.

At the Levant meeting, on Tuesday, the accounts showed a profit on four months' working of 241l. 13s., and a debit balance of 1648l. 7s. The tin sold, less dues, realised 3641l. 1s.; copper ores, 828l. 13s. At the North Levant meeting, held in Cornwall, the accounts showed a profit on four months' working of 58l., and a balance against the mine of 594l. The tin sold (21 tons) realised 879l. The costs were charged to Sept. 13. West Basset, 104 to 114; West Frances, 11 to 12; Wheal Agar, 54 to 64; Wheal Basset, 3 to 34; Wheal Grenville, 5 to 54; Wheal Kitty (St. Agnes), 24 to 34; Wheal Peavor, 15 to 16; Wheal Uny, 14 to 16; West Peavor, 44 to 54; Wheal Owles, 95 to 105.

**COPPER.**—Business in copper mines has been rather slack, and with few variations in prices. Devon Great Consols, 44 to 46. Wheal Crebor have remained steady at 54 to 56; the points in operation in the mine are valued in the aggregate at 215l. per fathom. The ends are worth 165l. East Caradon rose on Friday from 24 to 34; Hingston Down, 7s. 6d. to 10s.; Mellanear, 44 to 46; Marke Valley, 14 to 16; Morfa Du, 16s. to 17s.; Parys Mountain, 17s. to 18s.; New Cook's Kitchen, 64 to 74; East Wheal Crebor, 14 to 16; South Penstruthal, 4 to 1; West Seton, 474 to 50; West Tolgus, 25 to 274; North Penstruthal, 4 to 1.

**LEAD.**—Lead is firmer, and spelter has reached 20l. per ton, with an upward tendency, so that the prospects for lead and blende mines are very favourable. Vans have been largely dealt in, and leave off 214 to 224; the monthly report will be found in another column. The sale on Thursday, 200 tons of lead and 150 tons of blende, realised 3065l. East Vans have been better, and leave off 24 to 3. Roman Gravels, 11 to 114; the sale of ore on the 12th, 200 tons, realised 2361l. 5s. At East Roman Gravels the lode in the 97 cross-cut is not yet cut. The 75 is worth 14 ton per fathom. The stopes and pitches are looking well. There has been sampled 25 tons of lead ore and 20 tons of blende. Tankerville, 54 to 56; the 220 east is worth 3 tons per fathom; the same level west, 1 ton; and the bottom sump full 3 tons. The stopes and pitches are yielding good ore.

South Darren, 24 to 3; they have begun to drive the 110 west; the lode is worth 14 ton of rich lead ore per fathom. The lode in the east end is not taken down, so we cannot give the full value, but there is a strong rib of lead ore in it. The 100 end is worth 24 tons per fathom. The 90 end is communicated with the 80 winze; the lode is cut into 18 in., and so far very good, worth 1 ton per fathom. The general meeting is called for the 26th. Pateley Bridge, 12s. 6d. to 15s.; the 40 west, on Rake vein, is worth 44 tons per fathom. The 40 east is worth 2 tons, with appearances of improvement. The 30 east is very promising, and likely to become highly remunerative. West Pateley, 24 to 26; the agent writes—"The vein in the 56 has become as wide and rich as ever." Glenroy, 7s. 6d. to 12s. 6d.; there is an improvement in the 100 south, which appears to be approaching something good.

West Assheton, which a short time ago were at 10s., have risen to 2, 24. Gorse and Merilyn, 14 to 24; Great Holway, 44 to 54; Grogwinion, 3 to 34; Herodsfoot, 24 to 3. Leadhills have been in request at 34 to 4. Minera, 11 to 13; Aberllyn, 10 to 11; D'Eresby Mountain, 25 to 35; Clementina, 1 to 14; Pandora, 10s. to 15s.; West Chiverton, 44 to 54; North D'Eresby, 1 to 14; West Holway, 1 to 14; Wye Valley, 10s. to 15s.; West Wye Valley, 10s. to 15s.; Caron, 2 to 24; Crosswood, 14 to 24; Frongoch, 3 to 34; Hartington, 14 to 24; Mawston, 14 to 24; Red Rock, 1 to 14; Gwernymynydd, 44 to 54.

**FOREIGN MINES.**—Arendal, 4 to 44; Blue Tent, 2 to 24. Placer, ville, 24 to 26; the operations to develop the mine are progressing very satisfactorily. Cape Copper, 31 to 32; Chontales, 7s. 6d. to 12s. 6d.; Colorado, 15 to 16; Canada Gold, 14 to 16; Don Pedro, 11s. 6d. to 13s. 6d.; Eberhardt and Aurora, 24 to 34; Flagstaff, 14 to 16; Frontino and Bolivia, 24 to 26; Ruby, 34 to 36; Nouveau Monde, 17s. 6d. to 22s. 6d.; New Quebrada, 34 to 36; Santa Barbara, 37s. 6d. to 42s. 6d.; Panulillo, 4 to 44; Pestarena, 7s. 6d. to 12s. 6d.; Port Phillip, 9s. to 11s.; Richmond, 9 to 94; St. John del Rey, 270 to 280.

The Market for Mine Shares on the Stock Exchange has been scarcely so active during the week, but the comparative dullness is fully accounted for by the attention which has been absorbed by the settlement; perhaps the best proof that this explanation is justified being that yesterday and to-day there has been a decided revival, and quotations are quite as good, and in many cases better, than they were last week. Another evidence of the continued confidence of capitalists is that the new undertakings which have been brought forward have, on the whole, been well received, it being generally reported that the subscription lists are being satisfactorily filled. It is needless to remind capitalists that by securing their shares at par, by applying for and obtaining an allotment of them in the legitimate way, they have much better chances of realising profits than by purchasing second-hand at a premium, and miners may be congratulated upon the circumstance that it is reported that direct subscriptions are now being made, as the larger the percentage of dividends that can be secured to investors the more beneficial it is to the mining interests generally.

The remarks made last week as to the evils from the investor's point of view of syndicating for the purpose of securing premiums have been taken by more than could have been wished as applying to themselves; it is regrettable that the same cap fitted so many. The general character of the objection raised will be seen from the statement of the purser of East Crebor, given below; but it must be observed that it was stated and published in the Journal of Nov. 1 that "after paying for the property there is left a cash balance of 600l., and the company is on the Cost-book System. The shares are consequently at a premium." On Nov. 8 the price paid was by desire altered to 1s., which appeared to indicate that the 600l. was assumed to be paid up on the 12,000 shares. It is now said that the promoters have charged nothing for the property, and it is inferred that the shares are at a discount. The three statements taken together appear so irreconcilable and incomprehensible that with every desire to correct the error that has been made, it is difficult to know how to do it, so that there is no alternative but to let the purser's statement speak for itself, and delay the correction until next week.

On the Manchester Stock Exchange during the week the activity in mining and industrial companies' shares has been fully maintained. On Tuesday Bolckow, Vaughan, B. were dealt in at 364, Darlington Iron at 84 dis., Ebbw Vale 134 dis., John Brown 134 dis., and Sharp, Stewarts, 204. On Wednesday the dealings included Andrew Knowles (254 paid) 9 dis., Chatterley 8, and Tredegar, A. at 11 dis., whilst Ebbw Vale were about 2s. 6d. better, and John Browns improved fully 2l. The transactions yesterday were scarcely so numerous, but included Bolckow, Vanghans (100l. paid) at 1184; ditto, B. 374; Darlington Iron, 844; Ebbw Vale Steel at 13 and 124 dis., being an improvement of about 15s. during the week; John Brown, 104 to 104 dis., an improvement of 3l. on Tuesday's prices; Staveley Coal and Iron, A. at 23 par; and Tredegar, B. 194 (=odd lot).

The Mortgage and Agency Company of Ceylon, with a capital of 1,000,000l., in shares of 10l. each, is inviting subscriptions for the first issue of 50,000 shares, upon which the payment to be made is 10s. on application, 10s. on allotment, 1l. three months after allotment, and if required 1l. three months thereafter. It is intended to make no call beyond this 3l. per share, as debentures will be issued against the uncalled capital. It is mentioned in the prospectus, which will be found in another column, that the financial pressure which has of late so generally existed in the East, and the expressed intention of the banks in Ceylon to refrain from making advances on property, or against growing crops, and to restrict their business to pure banking operations, has thrown open a wide field for the safe and profitable employment of capital, which the present company proposes to occupy. The company will make loans on mortgage of land, advances on produce and growing crops, and will undertake the sale of produce unsold to market. This kind of business is carried on extensively in other colonies of the empire, and proves highly remunerative to those engaged in it, the last dividend of three out of seven similar concerns being 20 per cent., whilst the remaining four paid—one 15 per cent., one 124 per cent., and two 10 per cent., the aggregate reserve and balances of the seven companies, after paying these dividends, being 545,000l. It appears that lands in Ceylon occupied by Europeans are held under a Government title, and all transfers and mortgages of them are subject to compulsory registration. When loans are made by the company, the securities will be taken in the names of the trustees, and the uncalled capital, will constitute the security for the debentures. The rate of interest obtainable in Ceylon on primary mortgage bonds is higher than in England, ruling ordinarily about 8 per cent. per annum, and upon the security of these bonds and its uncalled capital, the company proposes to raise money upon its debentures at remunerative rates. The profits on this margin, added to the interest upon the called-up capital, should yield satisfactory returns upon their investments to the shareholders. The board of direction in Ceylon consists of gentlemen of high colonial position, and well known in this country, whilst the London board is composed of gentlemen of equally high standing, and intimately acquainted with Oriental business, so that there is reason to assume that the management will be sound and judicious.

The subscription list for the shares in Wheal Union is reported to be satisfactorily filling up, the shares having been freely applied for by parties in the neighbourhood, and it is particularly mentioned that no commission being paid to anyone for placing shares the whole of the subscriptions will be available for the development of the property, the subscribers' profits depending entirely upon the merits of the concern. This it may be urged is a revival of the legitimate old Cost-Book System, under which Cornish mining was so highly profitable to those embarked in it. During the past few years "promoters' companies" have so common that the good old principle of applying the shareholders' money to the working of the mine for which a company takes its name has been almost forgotten, and many new adventurers are probably unaware that it ever existed. Under the legitimate Cost-Book System no mine share can stand at a premium until every share into which the venture is divided is subscribed and paid upon, the amount being actually paid into the bank, and accountable for at the first meeting of adventurers. In the present case subscriptions are invited for 5000 shares at 1l. each, and of the 5000l. thus raised there will, according to the terms of the prospectus in another column, be 4500l. available for the purchase of machinery and payment of miners' wages. Every subscriber speculates on equal terms, and there is thus a striking contrast to the usual system in which the promoters win handsomely by securing the share premiums, whilst the real investors inevitably lose, or obtain inadequate interest, because the same proportion remaining for working capital of the money they have paid for their shares is insufficient to earn fair profits upon the larger amount they have paid.

The Rio Tinto Company notify that the 8th half-yearly drawing of their Seven Per Cent. Bonds will be held in Paris at the Crédit Industriel on Dec. 1, when 825 bonds of 20l. each will be drawn to be paid off at par, on Jan. 1 next.

East Crebor, 14 to 16; the purser writes—"As the value of the useful work done is equivalent to some 2l. 10s. per share, and each share has had the advantage of such outlay, it is manifestly unfair to insert the word 'nil' in the amount paid column of the Share-List, while the entry of 1s. paid, without a further explanation that the shareholders pay nothing for the property (which explanation your column does not afford room for giving) does not do justice to those who have interested themselves in the concern. If the amount paid cannot be left out the better way will be to leave out the name of the mine—as it is now the word 'nil' would be untrue, and the expressed amount of 1s. is simply misleading. I will take this opportunity also of saying I do not think the remarks in the City article last week, which myself and others have noticed, as referring to East Crebor are made in very good taste. The very thing therein complained of is the identical thing we have avoided. We have charged nothing for the property, and, consequently the shares command, and justly so, a good price in the market—and



if they were double the price they would only be equivalent to the actual outlay per share. There has been no "rigging" the price, and no combination of individuals to compel people to buy. There is a dealing price, and the dealers will buy as well as sell the shares.

John Abbot and Co. (Limited) have shown a marked improvement recently, and the present quotation on the Newcastle-on-Tyne Stock Exchange is 27½ to 28 dis.; and except at the latter price no shares are obtainable. As only a few weeks ago no business could be done in them at 45 to 40 dis., the shareholders may well be congratulated on the brightening prospects. There is an important improvement, but not to the extent supposed—a rise of about 5s. to 7s. per ton, with a drooping market, being somewhere about the mark. Spring may, it is thought, bring a good steady trade, but not if outsiders get hold and rig the markets.

St. John del Rey, 270 to 280; the latest telegram from the mines at Morro Velho, dated Rio de Janeiro, November 11, states that the produce for October was 32,500 oits., of the value of 12,593£, the ley of the ore being 6.3 oits. per ton. At Cuiba 200 tons stamped in 15 days yielded 2.7 oits. per ton. The advices (dated October 18) received to-day state that notwithstanding the sickness prevailing the work underground and at surface has been satisfactorily performed. The experimental process of stamping the residual sand has given still better results. The monthly profit has been unfavourably influenced by the increase of European and native pay, and a rise of 1d. per mile in the exchange. The lower ley per ton is due to the treatment of a large quantity of kills.

The commercial prosperity of the United States is strongly affirmed by the Philadelphia correspondent's letter published in the Times of Wednesday, wherein he states:—"The evidences of revived industry in the United States multiply, and the universal belief is that we have entered upon a period of unexampled prosperity. Every manufacturing and transportation interest seems to be pushed to the utmost capacity, and the demand for goods is enormous. The stock markets continue scenes of wild speculation, with everybody a 'bull.' The transactions are immense and prices steadily advance. All interests are similarly affected. I never knew of so remarkable a state of affairs. It seems as if there is not enough grown, or mined, or manufactured in the country to supply the demand, and that the railways and waterlines have not anything like the abilities to carry all the goods that are offered for transportation. Rivalries seem suddenly overwhelmed by the great wave of prosperity, while 'combinations' and 'cut rates' have been swept by the deluge of goods that has swamped the transportation lines."

Last week I took a brief journey westward and back over the Pennsylvania railroad, going as far as Cincinnati, about 700 miles from the seaboard. The journey showed what was going on, for it took me through the coal mining and manufacturing regions of Pennsylvania and Ohio. All the mines were pouring out their black diamonds and all the factories were at work. At Johnstown and Pittsburgh, great centres of the iron trade, there were no "dead chimneys," but all poured out their sheets of flame and clouds of smoke. Pittsburgh rivalled anything seen in your "Black Country" in its best days, giving, as the dense clouds and streaks of flame filled up the valley in which it stands, probably the best idea an anticipatory American can get of the infernal regions. Every furnace and forge and hammer and roll were working at full capacity, going day and night, with relays of men to keep the work moving continuously. The town was full of life and bustle, while miles of the rivers were covered with loaded coal barges and their attendant tow boats, awaiting a higher stage of water on the Ohio, so that they could go down and supply the people living on the shores below. About 15,000 tons of coals thus awaited shipment.

He then goes on to say that there is no better evidence of the present condition of business in the United States than the sight presented by the magnificent highway between the west and the seaboard, the Pennsylvania railroad. Upon this line is now being poured a flood of transportation such as it never saw before. It has every locomotive and car of its enormous equipment in use, and the station agents, overwhelmed with goods, are clamorous for the facilities to move them. Its stores are stuffed with produce that accumulates faster than the trains can carry it away. The manager is at his wits' end to provide rolling stock, although his shops are turning out new engines and cars by the hundreds. At the western terminal millions of bushels of corn and thousands of bales of cotton, with acres of cattle, hogs, sheep, and horses, await a chance to be carried east; while almost limitless quantities of coals and petroleum are also pressing for shipment. This great line tells the story of our reviving prosperity, and also shows what is going on to a greater or less degree upon all our railways. Could this sight of wonderfully revived trade be only transported to England, I am confident it would gladden your hearts; but it must be the prelude of better times for you, as American prosperity quickly tells abroad.

Missouri lead, 7 to 7½; the directors have this week called up the remaining 3d. due upon the shares, which will be payable on the 29th inst. A further remittance of working capital has been sent over to the mines. The last advices received, report favourable progress in the work being carried on, and state that a large demand has set in for white lead in the United States.

Richmond, 9 to 9½, ex div.; the usual telegram from the mines at Eureka, Nevada, states that the week's run was \$48,000 from 820 tons of ore. Of this \$36,000 was from No. 1 furnace and \$12,000 from No. 4. During the week the refinery produced doré bars to the value of \$45,000. The manager (Oct. 22) writes that "the explorations have gone on with the usual regularity. The 800 west drift still hard, but very favourable for ore. A winze has been started from the bottom of the 800 in the east quartzite drift; at present it is in broken ground. The furnaces are in good working order. The No. 1 smelter during the past week an average of 84 tons per diem. All the machinery, both innate and smelting works is in good working order."

Ruby, 3½ to 3¾; the reports to hand this week are of a highly satisfactory character. The telegram read to the meeting holds out promise of early discoveries, seeing that the points recommended by Capt. Rickard are being carried out.

The Emma Silver Mine litigation was reopened at New York on Oct. 21, the new suit involving substantially the same facts, issues, and claims as were set forth in the original litigation. The present suit is a proceeding in equity, brought by the Emma Silver Company (Limited), of London, against the Emma Silver Mining Company, of New York, Tenor W. Park, Horace H. Baxter, William M. Stewart, and Charles G. Lincoln, the only new parties in this proceeding being the Emma Silver Mining Company of New York, and Charles G. Lincoln. The plaintiffs ask that the sale by the defendants of 25,000 shares of the company be declared fraudulent and void, and that the defendants be decreed to pay over to the plaintiffs the moneys paid by the plaintiffs. Edwin W. Stoughton appeared as counsel for plaintiffs, and John E. Burrill and Edward J. Phelps for the defendants. The ground of the defendants' motion is in effect that the issues ought to be determined are similar to those involved in the suit at law. Judgment was reserved.

In Hydraulic or Gold Washing Companies shares there has been some improvement owing to the favourable advices received from the properties. Placerville, 2½ to 2¾; the developments in the mine continue highly favourable and are steadily pushed on to be in readiness to keep the large mill at work, when ready.

In Lead Mine Shares a considerable amount of business has been done, the continually improving prices of both lead and blende ores favourably affecting mines of this class, in addition to which several mines show great improvement. Van, 21 to 22; the usual monthly report will be found in another column. The 105 west is still looking well. The monthly sale on Thursday (200 tons lead and 150 tons blende) realised 3065£.

Groggish, 3 to 3½; encouraging accounts continue to be received respecting this mine. The blende deposits in the shallow workings are stated to be opening out well, and the company will derive a profitable revenue therefrom. The deep workings are also looking well, and prospects altogether are excellent. Groggish, 3½ to 4; the shares are in demand upon the improved price for ore; the mine continues to look well at all important points. Wye Valley, ½ to 1; it is stated that a reconstruction upon a favourable basis will shortly be carried out.

West Wye Valley, ½ to 1; the mine continues without important change, but improvements are expected to be near at hand. Caron, 2 to 2½; all is reported to be going on well at this property. Red Rock, ¾ to 1½; good progress is making here, and prospects continue to improve. Sales are expected to increase now that lead has risen in price.

Mineral Corporation of Great Britain, 12 to 13; with regard to the issue of the 2000 shares on the French market, it appears that the Cricri has raised a cry to the effect that it was simply illegal to offer shares in a company registered in England upon the French market. The opinion is, of course, absurd, and the Credit National, always a well informed financial newspaper sarcastically remarks "What a silence the Cricri would have maintained had it been more prudent," and this morning's Credit National gives a favourable account of what has been done at the mines, and what are the prospects. The manager of the mine reports that there is nothing new calling for special remark. The Great D'Eresby deep adit, in which the ground is becoming harder, is let to a full part of men to the end of the month at 37. 10s. per fathom, adit to be carried 7 ft. high and 5 ft. wide, men paying for all materials and tramping all their stuff. The end would cost 7£ per fathom to drive by manual labour, but the company has to find steam under present contract, so that the saving by drills will be about 35 to 40 per cent. as compared with hand labour. In the last six days' work they have driven 13½ feet, which is considered excellent work.

Fately Bridge, ¾ to 1; the 40 west, on Rake vein, is strong and massive, producing about 4½ tons lead ore per fathom. The 40 east is in a strong and promising vein, worth at present 2 tons per fathom, with every appearance of a fresh improvement shortly. The 30 east, on this vein, is also very promising, and gives appearance of becoming highly remunerative. Other parts unchanged.

The subjoined is the list of the closing quotations:—  
Ashton, ¾ to 1½; Botallack, 70 to 80; Carn Brea, 52½ to 55; Devon Great Consols, 4½ to 5; Dolcoath, 52½ to 55; East Caradon, 2½ to 3; East Van, 2½ to 3; Gwynnynydd, 4 to 4½; Great Laxey, 18 to 19; Leadhills, 3¾ to 4½; Marke Valley, 1¼ to 1½; Pateley Bridge, 18 to 19; Roman Gravel, 11 to 11½; Tankerville, 5½ to 6; Van, 21 to 22; West Ashton, 2½ to 2¾; West Chiverton, 4½ to 5; West Pateley, 2½ to 2¾; Wye Valley, ½ to 1; Wheal Grenville, 5 to 5½; Almada and Tinto, ¾ to ¾; Birdseye, ¾ to 1; Blue Tent, 2 to 2½; Canada Gold, 2 to 2½; Cape Copper, 30½ to 31½; Chonates, ¾ to ¾; Colorado United, 1½ to 1½; Don Pedro, 4½; Eschquer, ¾ to ¾; Flagstaff, 1¼ to 1½; Frontino and Bolivia, 2½ to 2¾; Hultfahl, 1¼ to 1½; Javali, 1¼ to 1½; Kapanga, 1¼ to 1½; New Quebrada, 3½ to 3½; Nouveau

onde, ¾ to 1; Pestarena, ¾ to ¾; Placerville, 2½ to 2¾; Plumas Eureka, 2½ to 3; Port Phillip, ¾ to ¾; Richmond Consolidated, 9 to 9½; Ruby and Dunderberg, 3½ to 3¾; Sierra Buttes, 1½ to 2; Santa Barbara, 2 to 2½; United Mexican, 2½ to 3.

**CORNISH MINE SHARE MARKET.**—Mr. JOHN CARTER, Camborne (Nov. 13), writes:—"The Cornish Mine Share Market has been less active, and prices of tin mine shares have declined during the week, but a fair amount of business has been transacted. At the close business is restricted by the fortnightly settlement at hand. Prices annexed:—Botallack, 70 to 80; Blue Hills, ¾ to ¾; Carn Brea, 52 to 53; Cook's Kitchen, 3¼ to 3¾; Dolcoath, 52 to 53; East Caradon, 2½ to 2¾; East Lovell, 2½ to 2¾; East Pool, 19½ to 20; Killifreth, ¾ to ¾; Mellanear, 4½ to 4¾; New Cook's Kitchen, 6½ to 7; North Bury, 3 to 4; Penhall, 1 to 1½; South Caradon, 55 to 57½; South Condurrow, 13½ to 14; South Crofty, 5½ to 6½; South Frances, 11 to 12; Tincroft, 15½ to 16; West Basset, 10½ to 10¾; West Chiverton, 4½ to 5; West Frances, 11 to 12; West Pevor, 5 to 5½; West Seton, 47½ to 50; West Tolgus, 25 to 27; Wheal Agar, 5½ to 6; Wheal Basset, 3 to 3½; Wheal Grenville, 5 to 5½; Wheal Kitty, 2½ to 3; Wheal Jane, 5 to 5½; Wheal Pevor, 15½ to 15¾; Wheal Uny, 1½ to 1¾."

—Mr. J. H. REYNOLDS, Redruth (Nov. 13), writes:—"The Cornish Mine Share Market, in sympathy with the drop in the tin market, is dull, prices generally ruling lower. The following are the closing prices:—Carn Brea, 52 to 54; Cook's Kitchen, 3¼ to 3¾; Dolcoath, 52 to 54; East Caradon, 2 to 2½; East Pool, 19 to 20; Marke Valley, 1 to 1½; Mellanear, 4 to 4½; New Cook's Kitchen, 6½ to 7½; Phoenix, 2 to 2½; South Caradon, 55 to 60; South Condurrow, 13½ to 14; South Crofty, 6½ to 6¾; South Frances, 11½ to 11¾; Tincroft, 15½ to 16; West Basset, 10½ to 11; West Chiverton, 4½ to 5; West Frances, 11 to 12; West Pevor, 4½ to 5; West Tolgus, 25 to 27; West Seton, 49 to 51; Wheal Agar, 5½ to 6; Wheal Basset, 3 to 3½; Wheal Grenville, 5 to 5½; Wheal Jane, 4½ to 5½; Wheal Pevor, 15½ to 16; Wheal Kitty (St. Agnes), 2½ to 3; Wheal Uny, 1½ to 1¾; Wheal Comfort, 2 to 2½."

—Mr. M. W. BAWDEN, Liskeard (Nov. 13), writes:—"The following are the closing prices this afternoon:—Bedford United, ¾ to ¾; Botallack, 75 to 80; Carn Brea, 53 to 54; Clitters, 1¼ to 2; Cook's Kitchen, 3¼ to 4; Dolcoath, 53 to 54; Devon Consols, 4½ to 4¾; East Caradon, 2½ to 2¾; East Lovell, 2½ to 3; East Pool, 19 to 20; Gawton, ¾ to ¾; Glasgow Caradon, 1¼ to 1½; Herodfoot, 2½ to 3; Hingston Down, ¾ to ¾; Marke Valley, 1½ to 1¾; Mellanear, 4½ to 4¾; North Penstruthal, 1 to 1½; Phoenix, 3½ to 4; South Caradon, 57½ to 60; South Condurrow, 14½ to 15; South Crofty, 7½ to 8; South Frances, 11 to 11½; Tincroft, 16 to 16½; West Basset, 11 to 11½; West Chiverton, 4½ to 5; West Frances, 11 to 11½; West Seton, 49 to 50; Wheal Crebor, 5½ to 5¾; West Tolgus, 26 to 27; Wheal Kitty, 2½ to 2¾; Wheal Jane, 4½ to 4¾; Wheal Pevor, 15½ to 16; Wheal Uny, 1½ to 1¾."

**INSURANCE SHARES** have, according to this evening's report of Mr. W. L. WEBB, of the Stock Exchange and Finch-lane, been dealt in as follows (if exceptional amount at special prices): Alliance British and Foreign, 28½; Commercial Union, 19 to 19½; Home and Colonial, 1½ to 1½; London and Provincial Marine, 4½; British and Foreign Marine (Limited), 18½ to 18½; Indemnity Marine, 96½ to 97½; London, 60½; North British and Mercantile, 43½; Royal Exchange, 400½. Insurance shares are generally firmer, especially Commercial Union. For closing prices see list on last page of Journal.

**GAS SHARES.**—The principal business in these shares, according to this evening's report of Mr. W. L. WEBB, of the Stock Exchange and Finch-lane, has been in Brentford Consolidated, 149½ to 150; Commercial, 179; Continental Union, 19½ to 19; European, new, 17½ to 18½; Gas Light and Coke, A, 179½, 179 to 179½, 180 to 180½, 179½ to 180½; ditto, fourth issue, 17, 18½ to 19; ditto, fifth issue, 18½ to 19; ditto, H, 7 per cent. max., 133½, 132½ to 133½, 134 to 133; ditto, 4 per cent. debenture, 100 to 100½; Imperial Continental, 186½, 174, 173½ to 174, 187½ to 188½, 189, 189½ to 190; Malta and Mediterranean, 2½; Monte Video, 15 to 14½; Oriental, 7½, 7 to 7½; ditto, new, 5; Para, 4½ to 5; Rio de Janeiro, 25 to 26½; San Paulo, 11½; South Metropolitan, 198 to 197 (if exceptional amount at special price). Gas stocks are very firm. Gas, A, has risen 2 per cent. upon investments by parties who did not succeed in getting the new stock they had tendered for, and Imperial Continental has risen 2 per cent. upon the issue of a good report and expectation of a favourable meeting. For closing prices see list on last page of Journal.

**TRAMWAYS.**—The closing prices of this evening, as quoted by Mr. W. ABBOTT, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

Messrs. PIXLEY AND ABELL.—GOLD: Since our last, we have received 28,180£ from the Brazils; 51,850£ from India; 37,500£ from West Indies: total, 117,530£. This amount has been quite inadequate to supply the requirements of exporters, and recourse has, therefore, been had to the Bank to the extent of 1,106,000£, the bulk of which has been sent to America; further amounts will follow. The shipments of gold from Liverpool to the States for the month of October amounted to 1,030,470£, and not 584,130£, as mentioned by last week. The steamer which left Havre for New York on the 8th inst. took 120,000£. The P. and O. steamer takes to-day 70,000£ to Egypt, and 20,000£ to India. —SILVER: The market for silver gradually became firmer after our last issue, and the price improved to 53½d. per oz. At this rate a considerable business was done; the firmness continued until after the allotment of Council drafts yesterday afternoon, when sales could no longer be made at the above quotation, and prices became very unsettled. As there are now holidays at Calcutta and Bombay lasting until Monday, there is no likelihood of much business being done at present, as we cannot receive advices of exchange before the 17th inst. The steamer to New York takes 191,700£ to India. We have received during the week 24,000£ from New York; 10,000£ from Germany; 14,900£ from West Indies: total, 48,900£.

\*\*\* With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: The Forest of Wyre Coal Field—Important Discovery (W. Molyneux); Coal Briquettes (Yeadon and Co.); Pneumatic Mineral Dressing; Water-Power for Mining Purposes (G. Rickard); On Compressed Air; Coating the Interior of Boilers; An Arctic Railway Project, Forsyth (W. J. Thompson); Central Railway Company of New Jersey; The Instantaneous Fuse and Igniter (Bickford, Smith, and Co.); Darlington's Rock-Drill (R. Willemott); Rock Drills (Hathorn and Co.); Rock Boring Machine (J. Barker); Wheal Agar—Boring Machinery (H. Teague); Treatment of Tin Ores (W. Nance); The Copper Trade; The Cambrian Company (E. Hawkins); the Flagstaff Silver Mining Company of Utah (A. A. de Metz); the Panullico Copper Company; South Wheal Frances (A. T. James); Wye Valley Mining Company; East Crebor Mine; Wheal Crebor; Mining in Montgomeryshire, and North Wales Correspondent; Mining in the Llanarnar District; the Llanwrst District—No. III.; Cardiganshire Lead Mines; Revival of Cardiganshire Mines (Abraham Francis); Scotch Mining Share Market—Meetings of the Ruby and Dunderberg Consolidated, Festona United Gold, Arisa Island Gold, and New Quebrada Mining Companies—Foreign Mining and Metallurgy—Foreign Mine Reports, &c.

**LEAD MINES.**—The gradual rise in the price of lead during the last few months, and its continued firmness in the market, have greatly increased the value of mines producing this metal, which forcibly confirms the views expressed frequently by Mr. Murchison for many years. Long after tin and copper had become much depressed, lead remained at a remunerative value, and it has been the first to recover itself; while the expense of returning it is, on the average, less than it costs to return the other metals. It may be safely predicted that the price of lead will go up a good deal more, and in support of this view we may allude to what the Times stated on Thursday—namely, that "Large orders for lead have been received in the Tyne from Austria. They include pig, red, and litharge. The lead trade of the North of England has improved very materially in the past month. The lead mines of Teesdale, which had been in a depressed state for two or three years, are getting into better work. There are large sales of Spanish lead upon the Tyne." We trust, however, that few if any new projects will be brought out, and we recommend the public to discourage any such attempts, for there are many good mines already at work that require more capital to open them properly, in which investments can be made on better terms than in new undertakings.

**PEN-YR-ORSEDD.**—The interest attached to the energetic working of this property continues unabated. The mine is only 100 fathoms south of the Rhosomer Mine, which with a capital of about 1,000£ yielded in a few years 30,000£ clear profit. The Hendre lode, which is the master ore of the district, has already been discovered at Pen-yr-orsedd, and altogether the mine has brilliant prospects. The shares are being absorbed rapidly.

**LANSWELL SILVER-LEAD MINES.**—The reports are considered even more encouraging than could have been expected. The No. 1 lode already produces 1 ton per fathom, the No. 2 lode 2 tons, and Nos. 3 and 10 respectively 3 tons per fathom. The weather has been very favourable, and both underground and at surface considerable progress is being made in all directions. The prospects of this mine are stated to be almost unequalled at the present stage and depth to which the works have been carried.

**BEDFORD UNITED.**—The accounts to be submitted to the shareholders on the 26th show that a loss of 341£ has been incurred in the last six months, but it is stated in the directors' report that it has been necessary to take in seven months' costs against six sales of copper ores, consequently the actual loss is reduced to about 115£, or equivalent to about 20£ per month. The last sale leaves a profit, and the sale on Nov. 20 is expected to realise little short of 300£, therefore a further profit may be fairly calculated upon. Every liability is charged up to the end of October, and the assets, including calls unpaid, which are all good, and will probably be considerably reduced before the meeting, are ample to pay off the whole of the debts of the mine. The remission of dues by the Duke of Bedford has been of great assistance to the company. The report of the directors intimates a further extension of tutwork, which will lay open ground, and prove beneficial to future samplings. A good rise

in the price of copper and this property would resume its old place in the list of dividend-paying mines.

**EAST CREBOR.**—A correspondent, writing from Tavistock, says:—"The starting to work of East Crebor Mine is hailed by the mining community of the neighbourhood with great satisfaction, many good authorities going so far as to say that they are sure it will be a great success, and ultimately be another Devon Great Consols. Crebor still holds its own—in fact, there is an improvement in the stoep in the back of the 120, where some remarkably rich ore has been broken. The improved quality of the ore at this point—the eastern part of the mine—corresponds with the great discovery of rich yellow ore (richer than ever known in England before) which was made some years ago in East Crebor."

## CAPPER PASS AND SON, BRISTOL,

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LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, HARD LEAD, BRASS SLAGS AND ASHES, COPPER REGULUS, MATTE, SCORIA, TIN ASHES, TERNE ASHES, &c., and MIXED ORES or REFUSE, containing LEAD, COPPER, TIN, or ANTIMONY.

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ANALYST AND ASSAYER,

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Mr. THOMPSON transacts business in every species of Stock Exchange and Mining Securities.

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Cook's Kitchen.	Gawton.	South Frances.
Colorado.	Herodfoot.	Tankerville.
Chonates.	Hultfahl.	Tincroft.
Devon Consols.	Killifreth.	Van.
Dolcoath.	Leadhills.	West Ashton.
Don Pedro.	Last Chance.	West Chiverton.
East Lovell.	Marke Valley.	West Frances.
East Van.	Nouveau Monde.	West Pevor.
East Caradon.	Pateley Bridge.	Wheal Kitty.
East Crebor.	Roman Gravel.	Wheal Pevor.
Eberhardt.	Richmond.	Wheal Grenville.
Flagstaff.	Ruby.	Wheal Uny.

BANKERS: LONDON AND WESTMINSTER.

MESSRS. JONES AND HOUSTON, 25, CROSBY HALL  
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20 Arenal. 45 Flagstaff, £1 13s. 3d. Rhydalun, £11.  
75 Bodlrids, £1½. 30 Great Holway. Richmond, £9½.  
Bryn Glas, £1½. 10 Hultfahl. Roman Gravel, £12.  
30 Carn Brea. 50 Killifreth. Scotch Consols, £2½.  
90 Chapel House, £1½. 5 Leadhills, £3½. Tamar Silver-Lead, 30s.  
100 Don Pedro, 12s. 9d. 60 Morfa Du, 15s. West Chiverton, £2½.  
32 East Van, £2 10s. 105 Parys Mountain, 20s 6. Wheal Crebor, £5½.  
15 Eberhardt, £3½. 50 Pant-y-Mwyn, £2½.

BRYN GLAS.—This mine will undoubtedly prove one of the richest ever discovered in Cardiganshire. The executive intend developing its enormous resources without delay.

SOUTH CREBOR.—This rich mining property is fulfilling the most sanguine expectations. The best proof of its value is the sales of lead and blende which have recently been made, amounting approximately to nearly £5000.

VAN.—These shares should be purchased, as a great rise in value appears inevitable.

SPECIAL BUSINESS in CARDIFF AND SWANSEA AND FLAGSTAFF either as buyers or sellers.

BANKERS: LONDON AND PROVINCIAL.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,  
29, BISHOPSGATE STREET, LONDON, E.C.

Can SELL the following SHARES at prices annexed:—  
50 Bedford United, 9s. 25 Gawton Copper, 13s. 6d. 100 Pestarena, 7s. 3d.  
20 Colorado, £1½. 25 Glenroy. 100 Port Phillip, 8s. 6d.  
20 Devon Consols, £4 17 6 20 Herodfoot, £2 8s. 9d. 100 Roman Gravel, £11½  
50 Don Pedro, 13s. 9d. 30 Hingston, 11s. 100 Rossa Grande, 3s. 6d.  
20 East Caradon, £3 5s. 50 I.X.L., 4s. 9d. 25 South Darren, £2 10s.  
25 East Crebor, £1 5s. 20 Leadhills, £4 1s. 3d. 40 Tamar Silver-Lead.  
20 East Van, £2½. 20 Marke Valley, £1 7s. 6 20 West Pateley Br., £2½  
20 Eberhardt, £3 5s. 40 Nouveau Monde, £1. 25 Yorke Pen. (pref), 19s  
25 Flagstaff, £1 12s. 6d. 10 Panullico, £4 2s. 6d.

BWLCH CONSOLS.—SPECIAL BUSINESS in these shares.

MR. T. E. W. THOMAS, STOCK AND SHARE DEALER,  
3, GREAT WINCHESTER STREET, E.C.

The following are prices at which business can be done:—

Buyers.		Sellers.		Buyers.		Sellers.	
D'Eresby Consols	£ 4½	£ 5½	No. D'Eresby Mount	£ 1	£ 1½		
Dolcoath	53	58	Parys Corporation	16s.	18s.		
East Caradon	3	3½	South Crebor	1	1½		
East Crebor	1½	1½	South Darren	2½	2½		
East Lovell	2½	2½	Tankerville	5½	5½		
East Van	2½	2½	Wheal Crebor	5½	5½		
Herodfoot	2½	2½	Wheal Jane	4½	5		
Leadhills	2½	2½	Flagstaff	1½	1½		
Marke Valley	1½	1½					

Friday Evening, November 14th, 1879.

N.B.—Business in SOUTH CREBOR.

MR. W. TREGELLAS, 19, BISHOPSGATE STREET  
WITHIN, E.C.

Deals in all descriptions of MINING SHARES at close market prices, and has special business in various Brazilian Gold Mines.

W. TREGELLAS recommends for a good rise the SANTA BARBARA GOLD MINE. Investors may see at his office the latest reports showing the progress of the mine, in which large dividends are being earned, and one will shortly be declared for the half-year ending June.

JOHN B. REYNOLDS, STOCK AND SHARE DEALER,  
37, WALBROOK, LONDON, E.C.

ESTABLISHED 20 YEARS.—BANKERS: LONDON AND SOUTH-WESTERN.



### Notices to Correspondents.

\* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

SIR.—If the maker of the Abegg's hand-boring machine would kindly send his address to me I should like to communicate with him.—A. WILLIAMS: *South Cambrian, Gwynedd, Aberystwyth, Nov. 8.*

SIR.—Will any of your readers inform me if it is possible to convert a company conducted under the Limited Liability Acts into a Co-operative company without winding up the former, in accordance with the Companies Acts, 1862 and 1867 if so, how?—ABIGUS.

SIR.—I hold a number of shares in a valuable lead and copper mine in South Wales, but unfortunately the management is in the hands of the principal shareholder, who also at a (so-called) general meeting, at which only two shareholders were present, got himself appointed a director. I would feel obliged if any of your readers would inform me if this proceeding is legal, and if the shareholders, although holding only a few in comparison with this autocrat, have not the power to call a general meeting, and so save this magnificent property from destruction.—FLAG.

SOUTH CEEBOR.—Can any of your readers inform me if this is the old Devon and Courtney Mine with a new name, and if the promoters or directors were in any way connected with the Wheal Wrey, Ludcott, and North Trevelyan Mines, which was about to be started nearly four years since, so well known, and long to be remembered by the unfortunate shareholders?—ISGUTHIER: *Liskeard, Nov. 12.*

Received.—"N. A. C." (Ambleside)—"J. M."—"J. T. H."—"O. S."—"Omen"—"Suffering Shareholder" (New St. Agnes) wishes for some information as to the anticipated prospects of the future West Kitt—"G. B. R."—"Shareholder" (Rhoswydd)—"H. T."—"W. R. R."—"W. M. E." (Stanhope)—"Constant Reader" (Leitrim)—"Shareholder" (Leadhills)—"Shareholder" (Wheal Crebor).

THE SUPPLEMENTARY SHEET.—We have received occasional complaints, and of late a good many, that the Journal is delivered by country booksellers without the Supplement. Subscribers would oblige us by demanding that the paper should be handed to them complete, as every Journal is accompanied by the Supplement when it leaves our office, and the fault of omission must rest with the country bookseller or their London agent.

## THE MINING JOURNAL,

### Railway and Commercial Gazette.

LONDON, NOVEMBER 15, 1879

#### THE GASES FOUND IN MINES.

In the carrying out of mining operations scarcely anything is of greater importance than an accurate knowledge on the part of managers of the nature of gases, the physical laws which regulate their movement, and the means by which their destructive properties can be neutralised and rendered harmless. But such knowledge is anything but general amongst the class to which it would be of the greatest benefit, and now that a Royal Commission is taking evidence with special reference to the subject, a notice of the gases found in mines and their properties cannot fail to interest a large proportion of our mine managers in all parts of the country, and who may be induced to make further investigation which will repay them well. In all mines, we may say, gases are met with, for if there were no other causes there would be the combustion of light and the respiration of men and animals, which lead to the formation of steam and highly deleterious gases, but in many places such are found in connection with the mineral being worked, so that when the latter has been removed from where it has been pent up for long ages they are at once released, in many instances spreading over a large area, requiring immediate dilution with fresh air to render them harmless. But many of the gases met with in mines have helped to form the mineral in which they are found, and so return to us in something like their original state on being liberated from their long confinement by the breaking down of the strata which enclose them. Amongst the most important as well as interesting of these is the carbonic acid gas, which is found in all our mines in quantities more or less. In mines in which coal is raised it is found in considerable volumes, and it is considered to be far more injurious to the health of the workmen than the inflammable gases. Owing to its specific gravity, which is 1.924, it is found in the lower part of mines, and after an explosion many men that escaped the fiery gas have been killed by the choke-damp, of which a large proportion is carbonic acid. Lights are extinguished in air mixed with one-tenth of carbonic acid, which acted on men in the same way as poison, and as soon as it amalgamated with the air by more than 8 per cent. there was danger of suffocation. Dr. A. SMITH, in alluding to it, says where there were 2 to 24 per cent. of it present, the proportion depending somewhat upon the temperature, &c., candles were extinguished, and that so small a portion as 1-10th per cent. was sufficient to cause a workshop to be considered close. The smallest quantity that would suffocate a man was not exactly known, but where there was sufficient to put out a candle it was evident that a person would not long survive in it. In excavations in which the air is constantly renewed carbonic acid is continually formed, so that there should always be sufficient ventilation to draw it away, and to keep the quantity which is mixed with the air below what would render it injurious to the workmen. Carbonic acid, it should be stated, is necessary to animal life, for a man in 24 hours converts as much as 7 ozs. of carbon into carbonic acid, and a horse 79 ozs., solely by the act of respiration, and all of which ascends into the air, being evolved by the heat of the body. But when it is converted into gas it is very different. It then takes an important part in the formation of coal, for the trees and plants that grew in the forests and swamps drew their carbonaceous properties from it, the gas and water existing in the soil and floating in the air being aided by the light and sunshine, for decomposition ceased in the dark. There is another property peculiar to carbonic acid. If a small quantity is added to an explosive mixture of air and fire-damp it will weaken and in some instances prevent an explosion, one-seventh added to a mixture the most explosive being sufficient to destroy the explosive property. Carbonic acid gas, too, is dissolved by water in a volume nearly equal to its own by atmospheric pressure, and under a higher pressure the water absorbs a larger quantity, which ceases when the extra pressure is removed. All gases are said to have the property of diffusion, or of mixing with each other, but carbonic acid is found in the lower part of all excavations, owing to its greater specific gravity, consequently in entering old or abandoned working places in mines they should not be entered under any circumstances until it was seen that they would allow of the combustion of lamps. As carbonic acid is the most deadly of our gases, managers of mines should be thoroughly acquainted with it and the places where it is to be found; and, as we have before stated, it is to be found where numbers of men and animals are to be met with more or less in all mines, and owing to the effect of even a small quantity on the health of workmen it should be swept away by copious and constant supplies of fresh air, for the working places in mines can be made as healthy as those on the surface.

Carburetted hydrogen has more terror for the miner than any other gas, although it does not affect his health to anything like the extent of carbonic acid; yet its results at times are something terrible, sweeping away hundreds of lives at a time. But there is very little doubt but that the majority of those explosions that have taken place were the result of preventable causes. Carelessness, neglect of ordinary precautions as to ventilation, defective lamps, blasting, smoking in an explosive atmosphere, or working in dangerous places with naked lights, are amongst the causes to which some of our explosions may be attributed. Unless indeed in the case of sudden outbursts of gas, which no foresight or precautions can anticipate or prevent, explosions of gas in mines should now be almost unknown. There can be no excuse for an accumulation of gas to the extent of its being explosive in a well-officer and well-managed mine. Even in those where gas is known to be given off in considerable quantities there should be no great difficulty in providing an adequate amount of ventilation either by means of the furnace or the fan to render it powerless for harm. By judicious splitting of the currents of air, almost any quantity can be sent through the working places of a

mine both pure and cool. The gas constituting what is termed fire-damp shows its presence in the miner's lamp, the wick appearing to be surrounded by a halo of a pale blue colour. The gas is lighter than air, its specific gravity being 0.555, that of atmospheric air being 1, and is not soluble in water, and unlike the carbonic acid, can be breathed without danger when it enters in a less volume than one-third into the atmospheric air. It is composed of 2 atoms of hydrogen, 2, and 1 atom of carbon, 6, its atomic weight being, therefore, 8. The relative weight, therefore, of carbonic acid gas, atmospheric air, and fire-damp, would be nearly represented by the figures 3, 2, and 1. When the fire-damp is mixed with from 30 to 15 times its volume of atmospheric air the flame of a candle plunged into the mixture would be elongated and enlarged according to the proportion of gas that approached the principal limit. A mixture of a small proportion of carbonic acid gas would cause the halo surrounding the light to assume a brown tinge of much greater distinctness. When the fire-damp forms one-fourteenth of the entire volume the inflammation extends through the whole gaseous mass, but without loud detonation. The rapidity of the inflammation increases with the proportion of gas until it amounts to over one-ninth or one-eighth of the total volume, and in these latter proportions the mixtures are explosive in the highest degree.

If the proportion of fire-damp is increased still further the mixture becomes less and less explosive, and when the mixture of gas with air contains more than one-third of the volume of gas it is no longer inflammable. Carburetted hydrogen is met with in various ways and places, being disengaged from the marshes and stagnant waters, and in some places flows from ordinary strata, and has been found in boring for rock-salt. But it is in the coal measures where it develops itself to the greatest extent, and in connection with which it is best known. It escapes from the cells of the coal, and in the seams that may be considered the most valuable, and it is not confined to depth, although the lower the bed there is generally the most gas. Below some beds of coal in ordinary strata the gas is pent-up under considerable pressure, from which it escapes at times with great force suddenly, without the slightest intimation. These sudden outbursts are of a serious nature, and their effects only counteracted by having in all mines where gas is given off the best of safety-lamps, for so vast is the volume at times given off that a naked light or a defective lamp would be the means of killing every living thing in the mine. But, it may be said with regard to fire-damp, where a safety-lamp will burn the air can be respired without danger; but it would be dangerous to remain when the cylinder of the lamp was filled with flame, because any violent agitation of the lamp or the air surrounding it might lead to the flame passing through the gauze, and so cause it to reach the outside atmosphere, when in all probability there would be an explosion. In what is termed proto-carburetted hydrogen there does not appear to be much difference from that just alluded to, its specific gravity being given at 0.999.

Sulphuretted hydrogen is also a gas that should not be allowed to prevail in mines, as it affects the health of the workmen. Many persons who for some time have been working in an atmosphere where it is found in considerable quantities are often laid up in consequence, although they are not aware of the cause. Owing to the chemical decomposition constantly going on in mines and to the moisture great changes take place, by which a good deal of the oxygen is absorbed, and is replaced by carbonic acid, nitrogen, ammonia, and carburetted hydrogen, which are more or less deleterious. But this need not be the case, for mines may be made healthy and salubrious—so that no man should be allowed to work in a place where there was a stagnant atmosphere or any fermentation leading to miasma going on. This can be easily accomplished by sending through all working places volumes of fresh air sufficient to dilute all gases brought along by the air current. Were this done, and proper attention paid to the gases that of necessity in some mines go on increasing in extent, and changing by chemical processes, we should hear but seldom of explosions, whilst the life of the miner would be extended by his working in a really healthy atmosphere, so that there would be no necessity for the appointment of Royal Commissions, or future legislation with respect to mines.

#### THE COAL AND IRON INDUSTRIES OF SOUTH WALES.

Considerable changes have taken place during the past few weeks in several parts of South Wales, and all of them most decidedly for the better, so that a brief notice at the present time may not be out of place. The coal field of South Wales is the largest in the kingdom, with the exception of the Clyde basin, but owing principally to strikes and disputes there has not been that marked progress in the development of the valuable seams of smokeless steam and other coal that might under ordinary circumstances have been expected. But of late a good deal more has been done, and several colliery owners, in addition to heavy shipments to the various home ports from Cardiff, Newport, Swansea, Briton Ferry, and Llanelly, have cultivated a trade with the Metropolis by railway. In 1859 coal was first sent over the Great Western to London, the quantity during that year having been 39,570 tons, which in the following year increased to 58,490 tons; now, however, the quantity sent is at the rate of more than a million tons annually, there having last month alone been forwarded over the Great Western 110,150 tons. But what is most gratifying in the present state of trade is to find the name of CRAWSHAY, of Cyfarthfa, once again as the exporter of both coal and finished iron. Thus we find his name once more in the list of colliery owners sending the produce of their mines to London, for during October upwards of 5000 tons of coal were sent over the Great Western Railway to London from the Merthyr Crawshay Colliery, whilst nearly 10,000 tons were forwarded over the same line from Nixon's Navigation. This improving change, it is to be hoped, will go on—but much, of course, will depend upon the men, whose experience of strikes should lead them to do all in their power to promote the interests of those who employ them. As to the increase in the annual production of coal, we may say that in 1874 the output was 10,184,885 tons; in 1877 it was 12,634,335 tons; and in 1878 it was 12,926,225 tons. Yet if we go back to 1855 we find in that year that the coal raised was 8,550,270 tons, or 13 per cent. of the entire yield of the kingdom, whilst last year it was not 9 per cent. A considerable tonnage of ironstone is raised in the southern part of the Principality, but considerably below what is required for the furnaces, so that a good deal has to be imported from Northamptonshire. For some years past there has been a rather rapid falling off, the quantity raised being in—

Year.	Tons.	Value.
1871	969,714	£543,422
1872	1,247,594	744,465
1873	943,926	581,384
1874	661,616	339,578
1875	495,840	247,920
1876	476,285	288,771
1877	367,316	220,389
1878	375,088	185,872

As regards the make of pig-iron, the trade has been decidedly retrogressive, there having been a considerable decrease in the number of furnaces in blast; but several of the old furnaces have been replaced by others of a better construction. In the year 1871 there were fifteen works and 53 furnaces in blast in Glamorganshire, but in 1876 there were only nine works and 28 furnaces going. In 1877 there were only eight works going, and 26 furnaces in blast, whilst last year there were nine works in operation, and 24 out of 76 furnaces using bituminous coal, and four furnaces using anthracite. At Cyfarthfa Mr. CRAWSHAY has six furnaces which after being out of blast for some years are again being put in operation, and should the trade go on increasing it is not unlikely that we shall see all of them in blast. The mills belonging to the same gentleman, of which there are four, with upwards of 40 puddling furnaces, are again in motion, and it is to be hoped that before long all of them will be running fully. The production of pig-iron during the last few years has been as follows:—

Year.	Tons.	Value.
1871	1,357,886	541,809
1872	1,003,623	756,120
1873	817,789	710,958
1874	714,724	746,136

There is one point, however, that should not be overlooked with

respect to South Wales, and that is whilst there has been a considerable decline in the malleable iron trade the introduction of the steel grade at several works has been most successful, and that is saying a good deal with respect to a new industry. The Dowlais Company have now six Bessemer converters, one of them having a capacity of 7 tons 10 cwt., another 6 tons, and the third 5 tons. With some 17 or 18 furnaces as well, the Dowlais Company will, for production, be one of the largest in the kingdom, scarcely second to the well-known Barrow Hematite Company. The Ebbw Vale Company, at their various works in Monmouthshire, have 18 furnaces, and have put down six Bessemer converters, four of them being for turning over 6 tons of steel, and two with a capacity equal to 8 tons. The Rhymney Iron and Steel Company, with nine blast furnaces, about two-thirds of which have been in blast for some time past, have been actively engaged in the Bessemer rail department, having three converters with a capacity each of 7 tons, whilst the Blaenavon Company have two converters of 8 tons each. In conclusion, it may be said that South Wales is now fully participating in the revival of trade, both coal and iron, with every prospect of its continuing, whilst the demand there is for Bessemer rails is such that the hands engaged at the furnaces, converters, and mill, are likely to have a long season of activity. Altogether, as we have before stated, what with the opening of the Cyfarthfa Works and collieries, and the increasing business that is being done in steel, everything shadows forth a better time for South Wales than it has had for a long number of years.

#### OUR EXPORTS OF RAILWAY IRON

Our exports of railway iron are at length beginning to exhibit some improvement, but we are bound to confess that they do not fully respond to the glowing statements which have passed current of late as to a revival in the iron trade. Thus the exports for October did not exceed 44,977 tons, as compared with 42,008 tons in October, 1878, and 56,048 tons in October, 1877. The increase in the shipments, as compared with October, 1878, will be seen to have been very small indeed, while as compared with October, 1877, there was a positive decrease. The experience acquired for the ten months ending October 31 this year was of a similar character, the aggregate exports of our railway iron for that period having been 392,171 tons, as compared with 391,597 tons in the corresponding period of 1878, and 419,161 tons in the corresponding period of 1877. The United States ranked third in October as consumers of our rails, having taken in that month 6468 tons, as compared with 78 tons in October, 1878, and 71 tons in October, 1877. In the ten months ending October 31 this year the United States did not absorb, however, more than 28,575 tons of our rails, the corresponding imports in the corresponding period of 1878 having been 703 tons, and in the corresponding period of 1877, 1049 tons. It is true that there has been a substantial increase this year in the consumption of our rails across the Atlantic, but this increase does not appear to have been of sufficient importance to justify all that has been said and written upon the subject. Our principal foreign and colonial rail customers have ranked as follows this year in respect of the importance of their imports:—British India, 70,357 tons; British America, 62,220 tons; Australia, 50,447 tons; Russia, 37,839 tons; Italy, 32,083 tons; Brazil, 29,376 tons; United States, 28,575 tons. The Americans thus stand only seventh in the list.

It is in pig-iron that we witness the full force of the special American demand which has arisen. Thus, the imports of pig iron in the United States in October attained the very heavy aggregate of 87,491 tons, as compared with 3028 tons in October, 1878, and 1843 tons in October, 1877. The aggregate imports for the ten months ending Oct. 31 this year were 164,134 tons, as compared with 23,282 tons in the corresponding period of 1878, and 31,022 tons in the corresponding period of 1877. The fact is the Americans have been unable to keep up their own supplies of pig-iron, in consequence of the extraordinary demand for rails which has suddenly sprung up on the part of American railroad companies, and they have accordingly been casting about for pig in all directions. The serious question which has to be considered is whether this American demand even for English pig will continue. It must be remembered that the Americans have been eager importers of foreign ironstone of late. The North of Spain, the North of Africa, and other mineral districts have been ransacked to supply the American demand for ironstone; and the question is whether, with larger quantities of foreign iron ore available for their use, the Americans will not become more independent of English pig. If this is the case, the present brisk Transatlantic demand for our pig may subside as quickly as it has arisen.

The activity now prevailing in the American iron trade has undoubtedly conferred one great benefit upon the British iron trade. It has very considerably strengthened prices, which had been reduced to a point of abject depression. The Belgian, French, and German iron trades have all participated in this benefit, and prices have been carried to a point at which there is some chance of profit, albeit that the rise in quotations has also brought about some advance in wages. But we are not at all equally clear that our rails have regained a market in the United States. The official statistics which we have summarised hardly support such a conclusion, although circumstances have been temporarily in favour of our ironmasters.

#### FLUID COMPRESSED STEEL.

The value of hydraulic power in connection with the production of steel of the highest class has been fully shown by what has been accomplished by Sir JOSEPH WHITWORTH, whose patented material has been subjected to the most severe test by the Admiralty. The patent, it appears, expires at the end of this month, and a few days ago an application was made to extend it, on the ground that the amount realised by it was not sufficient for the admitted value of the invention. In alluding to the invention Sir JOSEPH, at a large gathering, said the great novelty in his application of hydraulic power was in giving intense pressure to the fluid metal. In applying that great pressure to a column of metal it was diminished one-eighth of its entire length in less than five minutes, which showed the amount of work that was done. By the process the air-cells were expelled, and he did not know that there was anything which showed more clearly the value of the system than that they could have a column of metal 6 ft. or 8 ft. high shortened by one-eighth of its whole length in less than five minutes (1½ in. to the foot). It had been a dangerous and difficult process to carry out; but it had been quite successful, even on a large scale.

For Her Majesty's vessel Inflexible he had completed two screw propeller shafts. They were 283 ft. in length, and their weight was 63 tons. The weight of wrought-iron shafts would have been 97 tons, so that by using the fluid-pressed steel they saved 34 tons, being driven round during the whole life of the engines. The strength of the metal in the shafts was 40 tons to the square inch, and the ductility—the power of extension in pulling bar assunder—was 30 per cent., which he considered to be the value of the metal. The shafts alluded to were 17 in. in diameter, and had a 9-in. hole through them. They were cast hollow, of course of much larger diameter, and with a considerably larger hole. They could not expel the gas when the metal was in a semi-fluid state, so it was found desirable to get the pressure on as soon as possible after the metal was poured into the mould. The press had a power of 8000 tons, and in pressing the shafts the pressure was from 6 to 9 tons per square inch. They had not applied the press for forging iron, so that what they had done was confined to the fluid—pressed steel. As far as his experience went, the value of the hydraulic press was in proportion to the size of the mass—the larger it was the more beneficial and effective was the hydraulic pressure. The value of the pressure whilst the metal was in a fluid state was in proportion to the ductility required in the metal. If they wanted to produce steel which should have 30 per cent. of ductility they could not produce it at all without pressure—it would be full of air cells. If they wanted tool-steel where they had not much ductility, they might get about three-fourths of the length of their ingot comparatively sound, and the pressure in that case would be of very little value; but if they wanted to get steel which would be suitable for manufacturing purposes generally, then they could not produce it at all with the amount of ductility re-



quired without pressure. There was provision made for the escape of the gases, and there was considerable flame caused by their ignition during the time of their escape. The patent of Sir J. WHITWORTH, after hearing counsel, was extended for five years.

**MINERS' ASSOCIATION OF CORNWALL AND DEVON.**—The programme of classes to be held and prizes offered for competition during the current session in connection with the Miners' Association of Cornwall and Devon has just been issued, from which it appears that classes for the various subjects mentioned below are held at Redruth, Camborne, Tacklingmill, St. Agnes, Pendeen, St. Just, Helston, Hayle, St. Ives, Penzance, Chacewater, Truro, and Wheal Vor. It is mentioned that in addition to the numerous medals and prizes offered for general competition by the Science and Art Department, and by the City and Guilds of London Institute, to which the students may aspire, the prizes which will be awarded by the Council of the Miners' Association to the most successful pupils in the affiliated classes will include a free admission to the Royal School of Mines for one year to one pupil annually; the Miners' Association Medal, which will be awarded to all students who shall have worked not less than 12 months underground in some mine, and passed first class advanced stage in the principles of mining, and any two of the undermentioned subjects, and prizes in books (provided jointly by the Council and by the Editors of the *Mining Journal* and other newspapers connected with mining in Cornwall)—the average value being about a guinea—for best progress in inorganic chemistry, geology, mineralogy, principles of mining, practical chemistry, applied mechanics, machine construction, mathematics, theoretical mechanics, magnetism and electricity, steam, building construction, acoustics, light and heat, metallurgy, assaying, blowpipe analysis, and mine surveying. Affiliated classes have the advantage of supervision and occasional lectures from the lecturer to the Association. A copy of the Miners' Association report for each pupil. A discount of 20 per cent. in purchasing scientific works or manuals through the Association. The right to join in the annual excursion. The right to borrow books from the library; and the right to make use of the laboratory at Camborne under suitable regulations.

**THE TIN LODES OF AUSTRALIA.**—As there are still some who deny the existence of tin lodes in Australia, and predict the speedy termination of the tin mining industries of New South Wales and Queensland, notwithstanding the fact that Australian tin continues to come forward, and that Bensons's Kangaroo brand is now acknowledged to surpass in purity even the most celebrated Cornish brands, it may be interesting to learn that the Artisan Commissioner—a Cornish miner—appointed by the Society of Arts to report upon the mining products and apparatus, states that the New South Wales trophy representing the 32,027,130*l.* worth of gold raised in the colony was standing on 1224 ingots of tin from the Pyrmont Tin Smelting Co., Sydney, a certificate of assay accompanying the ingots stating that the blocks contained 99.96 per cent. of pure tin. The commissioner mentions that this was smelted from tin ore raised in the colony, and concludes by stating that around these ingots are bags containing nodules of stream tin and also exceedingly rich blocks of lode tin ore.

**THE AMERICAN COPPER TRADE.**—In his fifth letter to Mr. T. B. Potter, M.P. on the American import duties, Mr. J. S. Moore, of New York, deals with the copper tariff. Mr. Moore says that no copper mines in the world equal in richness the Lake Superior deposits. In 1878 one company owning the Calumet and Hecla Mines produced nearly 24,000,000 lbs. of pure ingot copper, or nearly 60 per cent. of the whole American production. During the last two years not only has the American consumption been supplied, but 11,297,876 lbs. were exported in the fiscal year ending June 30, 1878, and 17,200,739 lbs. in the fiscal year ending June 30, 1879. From 1792 to 1846 there was no duty at all on imported copper, but in the latter year a duty of 5 per cent. was levied on old copper. In 1857 all imports of copper were again declared free. In 1861 a duty of 5 per cent. was levied on copper ore, and 1*l.* 6*s.* per lb. on ingots. In 1869 the following duties which are still in force, were imposed:—On ore, 3*s.* per lb. of the fine copper contained; on old copper, 4*s.* per lb.; and on ingot copper, 5*s.* per lb. This tariff was vetoed by President Johnson, but was ultimately carried by both Houses of Congress. The result has, of course, been that copper mining in America has become a practical monopoly in the hands of the owners of the rich mines. The Calumet and Hecla Companies immediately amalgamated, and the shares that sold in 1869 for \$25 to \$30 are now selling at \$225. Mr. Moore calculates that the dividends paid in money and shares since Jan. 1, 1869, are equal to 200 per cent. per annum on the original cost of the shares, and challenges the companies to refute his statement. When copper ore was free from duty considerable quantities were imported from Chili, Canada, and elsewhere. In 1869, 14,572,656 lbs. of foreign ore were imported and smelted in Baltimore. The Baltimore works have now been shut up, and during the financial year 1878-9 only 241,042 lbs. of copper ore were imported, and as very nearly the same quantity of foreign ore was exported this evidently represents merely a transit trade. The duty collected on new ingot copper in 1878—the latest year for which the exact figures are available—amounted to the ridiculous sum of 5*s.* As regards the consumers, American copper is sold abroad at from 2*s.* 6*d.* to 3*s.* 6*d.* below the price in America, and the English, French, and German cartridge makers using American copper have thus been actually enabled to undersell the cartridge makers of New England.

**GOLD MINING IN CANADA.**—A correspondent of the Quebec Chronicle writes as follows:—"The township of St. George, Beauce, presents an appearance never before witnessed in this province. The Sir William Logan estate on Jersey Point, at the junction of the Riviere du Loup and the Chaudiere, is a scene of activity that promises well for the whole district; 120 men and 20 teams have been at work there for the last fortnight under the superintendence of an able mining engineer, and large machinery necessary for the operations has left here by the Quebec boat, which will astonish the population at the mines, they having been satisfied for years to pick up the gold out of the rivers whilst at low water. Other parts of the country are also making a stir, and gold is found and sold daily in various parts."

**THE JET INDUSTRY.**—One of the old industries of the Cleveland district is being revived in the reopening of jet mines. Though carried on on a very small scale when compared with that of the dominant industry of iron-mining, "jetting," as it is locally termed, is one of the special industries of the Cleveland district. There are large numbers of men employed in the mines or pits, and though it may not be the largest jet working is the distinctive industry of Whitby. Found along the cliffs to the north of the town, and more extensively under the alum shale in the hills that range from the sea towards the black Hambleton moors, jetting gave employment in its briskest years to hundreds of not ill-paid miners; for the work, though exhausting, was not dangerous, and demanded very little skill. But the large importations of recent years, and the dulness of trade—affecting especially ornamental industries—gradually closed the whole of the Cleveland jet mines or pits; and in the last return of the Inspectors of Mines the "unknown" produce of the jet mines represents far less than the term usually does. But stocks of jet at Whitby have been to a large extent exhausted, so far at least as English jet (which means usually Cleveland produce) is known; and the soft produce of Spain is neither so enduring nor capable of receiving so bright a polish as that of the home-found article, so that at last it has been found necessary to recommence in Cleveland the search for jet, though at first on a small scale.

**DISCOVERY OF SILICA IN SUSSEX.**—A most important discovery of a bed of pure silica has been made in Sussex, the value of which is especially interesting, as it will enable English manufacturers to obtain a supply of pure silica, unequalled by any they have been accustomed to procure from abroad. It would seem strange that this important deposit has remained so long neglected, but the fact is it is little known to the general public, inasmuch as in most of the trades in which it is largely used, such as glass, china, earthenware,

paint, plate, and even tooth-powder, the manufacturers conceal, as far as possible, this modus operandi, and the component parts of the substance made, as is exemplified in a recent case where a patent was upset, because the amount of silica (72 per cent.) necessary for ensuring sufficient hardness to china rollers was not specified. To the trade, however, the enormous value of an inexhaustible bed of pure silica will be at once apparent, and if the owner is sufficiently judicious to sell the product at a low price he will be able to close the English market against foreign competition.

#### REPORT FROM CORNWALL.

**Nov. 13.**—There is very little to report this week, but that little is not of an unsatisfactory character. There has not unnaturally come a lull in the activity of the demand for mining shares, and probably matters will remain quiet for a short time longer. We prefer to call it a lull rather than a reaction, for although prices have suffered in most cases some decline, there is no belief that this arises from any untoward aspect of the metal market. The probability is that we shall see tin at a substantially higher figure yet by if not before the end of the year, and it is said that Mr. Boyns expects to find the figure up to 70*l.* by the middle of February, until which time he has resolved not to sell the Wheal Owles stock. He is by no means alone in his conviction, for there has been a good deal of quiet, steady business within the last few days, of which the public know little, but which has resulted in a considerable increase of the smelting interest in our best tin mines. These are the "coming events" that one likes to see casting their shadows before.

One cannot say that the progress of boring machines in the county is anything like rapid; however, we suppose it may be regarded as steady. Of late it seems to have been hindered rather than helped by the conflicting claims of rival companies. It is natural that managers should try to get the best, but it may be questioned whether there is so much difference between the better known ones as seems to be commonly believed. The Eclipse is just now doing excellent work in Botallack in the submarine part of that mine, and driving 8 fms. a month against 2 fms. by hand labour. It is not one of the least of the advantages of drills worked by compressed air that they ventilate as well as drive, and this is especially seen in such workings as those under sea in the St. Just district, where the ventilation is of necessity very imperfect, and where, so far from there being any extra amount of water, we find the driest part of the mines. The Eclipse has also laid open a large quantity of ground at West Basset, whilst the merits of the Barrow, which proved for one thing the salvation of South Crofty, were fully expatiated on by Mr. Loam the other day at South Crofton. The Darlington is another machine that has done and is doing excellent work. It is stated that ere long Capt. Teague will introduce boring machinery into Carn Brea and Tincroft, and unquestionably it will be a very wise step. These mines, like nearly all the concerns of any consequence, are just now looking remarkably well. Indeed, we question much whether there ever was a time when the material prospects of our tin mines looked so bright, and copper and lead mines, too, appear to be in much better condition than for a long time past. There is really an enormous quantity of mineral ground now laid open in the county, which should pay handsomely for the taking away. Devonshire, except in the Tavistock district, where there are a good many signs of life, appears to lag behind. The depression there has really been far more severe in proportion to the area occupied than in Cornwall, taking the county at large, for it has amounted in the north of the county to practical annihilation, and in connection with Dartmoor proper there is hardly a mine now left; yet we cannot but believe that matters must mend, and that, for example, such a district as that at Combarton must have a future before it, while there is a good deal of work of development at North Molton way and at various points in the Dartmoor borderland. The unworked mineral areas of Cornwall are, of course, far more extensive, but there is no apparent reason why any should be neglected.

#### REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

**Nov. 12.**—I have great pleasure in complying with the request made by "Miner," in last week's Journal, to state my reasons why I hold the opinion that copper in paying quantities will not be found in the county east and north-east of the Van Mines and Trefeglwys. It is quite true, as "Miner" says, that the Lower Silurian strata are present, or come to the surface, for some distance in that direction; but it is the upper portion of the ore strata—the summit of the Llanderlo with the overlying Bald or Caradoc beds that do so. Now, there is not, I believe, an example in the world of a paying copper mine worked in these strata. The great and well defined horizon of productive copper mines in these old strata lies near the junction of the Lower with the Upper Cambrian, in the group of strata lying below the Lower Silurian. It is possible that if the mineralogical conditions under which great bodies of copper occur, consisting of the prevalence or proximity of felspathic, hornblende, and dioritic rocks, prevailed in the neighbourhood the district might form an exception. But the fact remains that such rocks do not prevail in the upper portion of the Lower Silurian, and certainly they are conspicuous by their absence in the district under consideration. I am aware that the Cambrian Mines may be adduced as an example of such an exceptional case; but first it remains to be seen if these can be profitably worked, which I hope may be so; and, secondly, these mines occur where the oldest strata in Cardiganshire are thrown up in an anticlinal ridge near the surface, which is a great point in favour of these mines.

The revival in the slate trade has reached the Llangollen district, orders coming in to the quarries, and more men being employed. The revival in the iron trade, too, is most marked. The new British Iron Company's works, at Arefair, which have until lately been overgrown with grass, have been re-started, and the men work in relays night and day. More activity prevails at the collieries, although there is no material advance in prices to record. At the southern end of the coal field Brynknallt Colliery has re-started, and the Presgwyn and Moreton Hall Collieries have begun to do a little. In railway matters, the promoters of the Welshpool and Llanfair Railway are wasting their energy in quarrelling. In Pembroke, the extension of the line from Rosebush Slate Quarries to Fishguard is progressing rapidly. A revival of the scheme for constructing a railway from Oswestry to Llangynog is also talked of, Mr. Lyons, the proprietor of Llangynog Slate Quarry, and Sir W. W. Wynn, M.P., being mentioned as the chief promoters, with Mr. W. Williams, of Oswestry, as secretary. An inquest was held last week touching the death of John Lysan Jones, who was killed at the Welsh Slate Quarry, at Festiniog, recently by being carried up by a strap, and crushed against the roof of the machine-house; a verdict of "Accidental Death" was returned. A batch of a dozen colliers were summoned before the magistrates at Hawarden last week for unlawfully absenting themselves from work at the Hawarden Colliery, near Buckley. It appeared that they had been accustomed to work with naked lights, but upon Mr. Gregory, the manager, observing the presence of gas he required them for their own safety to use safety-lamps. They refused to do, and left their work. They were convicted, but the colliery company gave up their claim for damages amounting to 12*l.*, the colliers having to pay costs.

The traction engine which formerly plied between the Llangynog Slate Quarry and Porthywaen, which was taken off the road in consequence of numerous vexatious prosecutions, was transferred to Portmadoc, to work between that port and South Snowdon Slate Quarry. Similar prosecutions have been commenced there. If they will precipitate the construction of a railway from Portmadoc to Beddgelert we shall not complain; but it is annoying to find the little local authorities so bent on hindering the development of trade in their various districts.

The electric light produced by Gramme's patent was tried with great success last Thursday in one of the large workshops of the Hydraulic Engineering Company, Chester.

I am sorry to say that "Enquirer," who hitherto has been courteous, is losing his temper, unnecessarily I think. Perhaps he, too, finds in the course of his enquiries, like many more of us, that, as

the French put it, "He that increaseth in knowledge increaseth also in chagrin."

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

**Nov. 13.**—The coal trade is in a satisfactory condition, alike as to manufacturing and household sorts. Many of the pits are taxed to their utmost to satisfy the demands which are made upon them, and there is every prospect of the excellent demand continuing. The colliers are pretty much settling down to their new wages, looking forward to another advance at a not very distant date. The iron-workers, however, are manifesting a determination if possible to secure a second rise in wages at once. They have, through their agent, just handed in a notice to the employers' secretary of the Arbitration Board, for a reconsideration of the wages scale, basing their claim upon the advance of 10*s.* per ton, which was made by the marked iron houses two days after the late award of Mr. Joseph Chamberlain, M.P. Ironmasters are this week consequently firmer than ever at the advanced prices. Buyers, however, hold off somewhat.

The new price list of the Earl of Dudley gives his lordship's present quotations for bars—as lowest quality, 8*l.* 12*s.* 6*d.*; single best, 10*l.*; double best, 11*l.* 10*s.*; and treble best, 13*l.* 10*s.* His lordship's angle iron, as also strips and hoops varying from 14 to 19 w.g., of the several qualities already mentioned are respectively, 9*l.* 2*s.* 6*d.*, 10*l.* 10*s.*, 12*l.*, and 14*l.* Round Oak T iron, not exceeding 8 united inches of the qualities mentioned, are respectively 9*l.* 12*s.* 6*d.*, 11*l.*, 12*s.* 10*s.*, and 14*l.* 10*s.* The new prices of Messrs. Wm. Barrows and Sons are for bars—B. B. H. crown, 8*l.*; B. B. H. best, 9*l.* 10*s.*, and best best, 10*l.* 10*s.* B. B. H. plates are 10*l.*; best boiler-plates, 11*l.*; double best, 12*l.*; and treble best, 13*l.* Sheets of the same firm to 20 w.g. are 10*l.*

New American orders for barrel hoops and for baling strips are again being placed with Staffordshire makers, and at prices which are a good rise upon the figures that regulated former contracts. It is calculated that orders for a total of 16,000 tons of barrel hoops have of late been placed on this side the Atlantic, and this district has secured the main part.

An explosion of fire-damp occurred on Wednesday at the Short Heath pit of the Pellsall Coal and Iron Company, by which six lives were lost. The deceased were four miners who were driving a heading in the fire-clay coal, Joseph Frost, the chartermaster, and Mr. John Slack, the chief engineer, both of whom had gone down to inspect the works. Death was caused by suffocation. Five widows and over 20 orphans are left.

Mr. George Gill (late of the firm of Gill and Hildick, Walsall) and Mr. Thos. Addison Russell, late secretary to the firm of John Russell and Co. (Limited), have secured a plot of land at the Pleck, Walsall, as the site of works for the manufacture of tubes. The style of the new firm is Gill and Russell.

At Messrs. Ludlow, Roberts, and Weller's sale, on Monday, thirty-five Birmingham Banking Company shares realised 16*l.* and 15*l.* 15*s.* per share respectively; Midland Banks, at 65*l.* 15*s.*; twelve Lloyds Bank, at 23*l.* 5*s.*; twenty Ordinary Patent Shaft and Axletree shares, at 4*l.* 1*s.* 3*d.*, and forty preference shares in ditto, at 8*l.* 5*s.* per share.

An incorrect rumour has found its way into print to the effect that the Team Valley Ironworks, Gateshead-on-Tyne, have been acquired by Mr. Caleb Bloomer, of the Pellsall Coal and Iron Company. The real purchaser is Mr. Boaz Bloomer, who was Chairman and managing director of the Pellsall Company till 1877.

**THE SHOCKING COLLIERY ACCIDENT.**—Wolverhampton, Thursday: The pit has been descended to-day by the manager of the Pellsall Coal and Iron Company, the owners, and by the assistant Mine Inspector of South Staffordshire, and other mining authorities. They found the workings free from gas and very little disturbed. The shaft was 150 yards deep: 50 yards from the bottom a scaffold had been erected, from which the six deceased approached two headings they were driving. It is feared that explosive gas had accumulated under the scaffolding, and that it fired at a candle dropped through the scaffold.

#### REPORT FROM DERBYSHIRE AND YORKSHIRE.

**Nov. 13.**—There has been very little change in the lead mining districts of Derbyshire of late, but there is every prospect that next year will be a more prolific one than the present has been, for the increased price of lead cannot fail to stimulate many of those working mines to make increased exertions to produce a larger quantity of ore. The improvement in the iron trade has been well maintained, and prices have been such as to repay those who have kept large stocks in hand, and several companies and firms were in that position two or three months ago. Large quantities have been taken by millowners in Staffordshire and other districts. It is quite probable that early in the new year some more blast-furnaces will be lighted, for the existing demand is not only likely to be fully maintained, but to be considerably increased. In manufactured iron more has been done, but there is still room for improvement as regards mill material. The foundries are also better employed, more especially in gas and water pipes. The Bessemer works at Driffield keep busy, turning out large quantities of rails, a heavy tonnage of which is for shipment. During the last few weeks the house coal trade has been more active than during any previous part of the year, although the prices have not gone up to the extent that might have been expected, for there has only been a comparatively slight advance on the summer rates. The demand for London has been particularly good of late, no less than 27,000 tons having been forwarded from Clay Cross alone during the month of October. The pits at Eckington have been busier than usual, whilst those in the neighbourhood of Chesterfield have also been doing well. Along the Erewash Valley business has also improved, both at the iron-works and collieries, and the same may be said with respect to the more southern part of the county. A considerable tonnage of coal is being sent over the Midland to Birmingham and the west, as far as Bristol and Bath. Steam coal moves off somewhat slowly, the exports having declined, but they have been very moderate during the summer months.

In Sheffield trade generally goes on improving, and during the remainder of the year the workmen will at most places be well employed. A considerable number of workmen have lately been put on at the Atlas and other works, where considerable orders are in hand for plates and other rolled material. Just now there appears to be the greatest activity at the shipbuilding works on the Clyde, and this will have the effect of increasing the demand for both iron and steel plates, and just now large quantities of the latter are being rolled for that purpose. In armour-plates there is a fair output, as there is also in other descriptions of war material for our own Government. Makers of Bessemer rails continue busy, but new contracts, owing to the heavy advance in the price of the raw material, are only taken at enhanced rates. Some good orders have been received from America for rails, cutlery, plain steel, and other materials, whilst pen and pocket knives, as well as razors, have been sent out in increased quantities to China, the East Indies, and Japan.

The South Yorkshire miners are still in a very unsettled state, there being two parties in the council, one in favour of restricting the output, expecting by so doing to raise wages, whilst the other is opposed to it. The consequence is that the Association runs the chance of foundering, as an attempt is being made to form a new one, allowing the lodges to keep their own money, instead of sending it to the secretaries. The coal trade, however, is good so far as households are concerned.

The strike at Berley Colliery still prevails, and about 1000 men and boys are out. The result is that instead of sending 8000 tons of Silkstone coal to London last month the quantity forwarded was only 400 tons.

**MINING IN NORTH DEVON.**—Explorations have just been made in the silver-lead producing district of Combarton, and they promise to lead to the most satisfactory results. It is believed a mass of richly impregnated ore lies buried along the course of the once celebrated Combarton lode, and that all that is wanted are active operations to prove the value of the property. Old miners in the district adhere to the conviction that North Devon is still rich in



silver-lead ore, and that the time will come when the adventurers will be deservedly rewarded.

**BREACH OF COLLIERY RULES.**—At the Barnsley Town Hall, on Wednesday, 12 miners were summoned for a breach of the 25th special rule at the Hoyland Silkstone Colliery on the 31st ult. by disobeying the orders of the hanger-on. On the above date the defendants went to work, when they found the south jenny partly blocked through a fall of roof. They had to wait three hours for it being cleared away, at the expiration of which they refused to commence work. They went to the pit bottom, when the hanger-on refused to let them ascend, and they commenced pushing the corves about, thus placing themselves and others in danger. Mr. Clegg, of Sheffield, who appeared for the defendants, contended that they were justified in leaving the pit under the circumstances. They were each fined 2s. 6d. and costs.

#### TRADE OF THE TYNE AND WEAR.

Nov. 12.—The coal trade has been considerably retarded this week owing to the want of ships, severe weather in the North and other seas having prevented the arrival of sufficient tonnage. In consequence many of the leading steam coal pits in Northumberland have only been worked partially, some less than half time. There are, however, sufficient orders on hand to keep the works going the week, and it is expected that nearly full time will be made in most cases at those works. At the Tyne Dock shipments of gas coal have been fair, and most of the best gas, house, and coking coal works are fairly kept going, there are, however, some exceptions of little moment. The increased demand for coal and coke is likely to be met perhaps a little too promptly by coalmasters by increasing the output of existing collieries, and reopening works that have been closed some time, owing to the depression. The North Biddick Collieries, belonging to Sir George Elliot and partners, has been reopened, and also the Brandon and Croxdale Collieries, Roughlea, near Hunnuck, Whitelea, &c.—these latter are coking collieries. Negotiations are also now pending as to the sale of three collieries in South Durham, two of which have been closed for some time owing to financial difficulties. The probable purchasers are Manchester gentlemen, and after elaborate viewing of the collieries they have made an offer, which forms the basis of the negotiations. If these ultimately result in purchase, the pits will be at once recommenced. A too rapid increase of the output may prevent the increase of prices which is so much required to enable the masters to realise fair profits on their operations. Caution is no doubt required in the operations; of course speculators are now induced to invest in the coal and iron trades, as furnaces and collieries can be purchased at very low prices. Increased rates have been secured for pig and manufactured iron, and these increased rates are likely to continue, but the rates in the price of coal follow the rise in iron rates only slowly. House coal has advanced a little in price, and there are more enquiries for manufacturing and small coal.

The Iron Trade has been firmer, and stimulated by the fact that there has been a net decrease of 18,700 tons in the last return of stocks, and also the improvement in the Scotch market. The rates have, however, been very irregular, and while some merchants have been talking of 43s., and state that sales have been made at that figure, others have been at 42s. No. 3; but the average rate may be put down at 42s.—makers ask 45s. The shipments of pig-iron have fallen off this week, but that has not had much effect on the market, as it is well known that large deliveries must be made during the month to supply contracts entered into some time since. Last month the shipments of iron to Wales were over 9000 tons—considerably in excess of the usual quantity. The reports as to iron shipbuilding give encouragement of a larger demand for plates, and hence of a consumption of pig-iron. The deliveries for the United States are expected to be good. The prospects for next month are considered, on the whole, to be highly encouraging. The prices of manufactured iron are not much changed.

The new sinking at Marsden continues to progress favourably. At Monkwearmouth it is in contemplation to sink a new shaft at Hendon to communicate with the workings of this very extensive colliery. The quantity of coal now laid open at these works is enormous, and the Maiddin seam at some points is 9 feet in thickness, with only 2 inches of band, the famous Hutton seam being 5 feet and upwards in thickness.

The chemical market continues firm, but business has not been so excited as last week; on the whole, however, prices keep well up, although some sales have been made at slightly lower rates. Quotations are for bleaching powder, 6l. 10s. 10s. net; soda crystals, 3l. 12s. 6d.; bicarbonate of soda, 10l. 2s. 6d.; sulphate of soda, 3l. 15s., &c.

There is a very marked improvement in the lead market, and in several of the Durham dales there is much fuller employment for the miners. The price of lead has risen from 13l. per ton to 17l. per ton for English pig, and as the tendency of prices is still upwards, it is hoped that stocks will be cleared shortly to a considerable extent, and this will lead to an enlarged production.

**NORTH OF ENGLAND IRON TRADE.**—The iron market at Middlesbrough, on Tuesday, was numerously attended. It was ascertained that Messrs. Connal and Co., the warrant storekeepers of Middlesbrough and Glasgow, had a stock in Cleveland amounting to 90,000 tons, the highest point yet touched. They expect to take in a fair quantity of iron this week. Storing is now of a much more healthy nature than it was a few months ago. The Glasgow stock of Messrs. Connal and Co. stands at 268,096 tons, being an increase in the week of 7896 tons. The Middlesbrough market was reported to be rather weaker; but, as a matter of fact, pig makers continue to quote No. 3 45s. per ton, and did not show any anxiety to obtain orders. Merchants quoted No. 3 at 42s. per ton. There is a good demand for pig-iron. Trade on the whole is in a better condition, and there is a growing feeling that improvement is permanent. As an indication of the faith in the early future, there are seen on all sides preparations for doing more work. The Wearside Iron Company blew in a furnace on Monday, and will blow in another this week at Tudhoe. It is contemplated to put in operation the iron works at Tow Law, which have been idle for some time. Although the shipments of pig-iron from Middlesbrough fell off last week, there is a steady inland trade going on, and blast-furnace owners are sanguine that trade will be better next year than it has been since 1874. Weak and small holders of No. 3 offer parcels at 41s. per ton; but this cannot be called the market price. There is more activity in the finished iron trade. For shipbuilding iron is in better demand, and prices are stiffening. Iron rails are quoted 5l. 17s. 6d.; ship-plates, 6l. 10s.; and bars, 6l. 2s. 6d. There is unusual activity in the several foundries. Chairs and pipes of various descriptions are in great request. At some of the foundries the full resources of the establishments are not equal to the pressing requirements. Engineers, too, are busier than they were. Some very fairly good orders have recently been secured by firms in this district. Messrs. Head, Wrightson, and Co., of South Stockton, are very busy on bridge-work and general engineering. The several shipyards on the Tees look exceedingly bare just now, but the prospects are brightening. Messrs. Raylton, Dixon, and Co., of the Cleveland Dockyard, Middlesbrough, have been commissioned to build an Atlantic steamer of 4000 tons burden. The same firm will shortly commence the construction of four other steamers, so there is every likelihood of a very large number of men being employed at this extensive establishment during the winter.

The total production of pig-iron in Cleveland has been raised from a little over 52,000 tons monthly to 164,000 tons; and there has been a more than equivalent increase in the shipments from Cleveland ports. The largest part of the increased production hitherto has been in the Middlesbrough district, whence the bulk of the shipments are being sent; so that it is apparent that hitherto the increased demand for pig-iron has chiefly been for use in other consuming centres. Several furnaces, however, have been and are being put into blast in the inland portions of the district—at Grosmont and Tudhoe for instance,—so that it is evident that there is an increased demand for iron for the local forges and foundries. Very large orders have been received by iron shipbuilders on the Clyde, Tyne, and Tees, and the greater part of the iron for these will be sent from the Cleveland rolling mills,

which are well occupied with orders for plates and angles for the ship-building yards. This improved local demand for iron will compensate for the decrease in the shipments usually experienced at this season of the year. Although, so far as is known, no additional orders for pig-iron for the United States have been placed, two for bar or manufactured iron have been obtained by Cleveland firms, and one of considerable magnitude for steel rails is being executed at the Eston Steelworks. The production of steel in the Cleveland district is being enlarged, the Rosebery works having commenced operations at Middlesbrough, whilst good progress is being made with the Bessemer works in course of erection at Darlington and Guisborough.

#### REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Nov. 13.—On Monday Mr. Henry Russell Evans was unanimously elected Mayor of Newport. Mr. Evans is well known in the financial circles of the Metropolis. In his remarks when installed in the civic chair he expressed the hope that the time was not far distant when the first sod of the railway connecting the port with the rich coal producing district of the Rhondda Valley would be cut. At the London Bankruptcy Court an application has been made to expunge the proof against Mr. W. Wake, of Sheffield, for 6497l., in the affairs of Mr. W. T. Henley, late of the Pontnewydd Works, who failed in 1875. An adjournment took place to Nov. 21. Messrs. D. Davies and Son, owners of the Ferndale Collieries, have come to an arrangement with their men, which I give *in extenso*:—"It is hereby agreed that the following sliding scale to regulate wages be adopted from Dec. 31 next, 1879:—1. That the present rate of wages paid shall be due to the workmen when the selling price of large steam coal, free on board at Cardiff, is ascertained to be 8s. 6d. per ton net.—2. That for every 1s. per ton advance in the selling price, free on board at Cardiff, the workmen are to receive  $\frac{1}{4}$  per cent. advance in wages, based on the present rate of wages paid, and for every equal decline in the selling price a reduction of wages to the same extent is to be submitted to by the workmen.—3. That when an advance or decline of 6d. per ton on the present selling price of 8s. 6d. per ton net, free on board at Cardiff, be ascertained by the accountant to have taken place, then  $\frac{3}{4}$  per cent. (or 9l. in 1l., on the present rate of wages paid) shall be advanced or reduced as the case may demand.—4. That an accountant be appointed to ascertain the selling price at Cardiff at the end of every three months, from Dec. 31, 1879, and the wages due according to his finding are to rule for the following three months, and so on for every three months during this agreement.—5. That this agreement shall be in force for two years from Dec. 31, 1879, and at the expiration of that period it shall be subject to be terminated by a six months' notice on either side.

The serious illness of Mr. Menelaus, of Dowlais, is announced; to-day, however, he is reported to be a little better. The iron trade during the past week has been active, and the clearances made have been large, and mainly to the United States. Things are brisk at Cyfarthfa, the rails being daily sent by canal for shipment at Cardiff. It is in contemplation to start the furnaces at Ynysfach, and the news is now confirmed that the Plymouth works have been purchased. At several of the works more activity is reported to exist, and good news in this respect comes from Treforest. The demand has been good, and finished descriptions sell at slightly enhanced rates. The enquiry for rails is fairly good. Bars are also in rather better request. Pig-iron is also tolerably well enquired for. The demand for tin-plates is also well maintained. The Tydee and Rogerstone Works, near Newport, are shortly to be restarted, Mr. Henry Evans being the manager. It is stated that Messrs. Conway and Co., of the Pontnewydd Works, have resolved to go back to the old rate of wages prevailing three months ago. Makers still ask increased prices.

The wages question is still existing in the coal trade. The Plymouth colliers ask more wages; and a deputation of the house colliers of Monmouthshire and Glamorgan have met the associated proprietors at Cardiff. What the men really wanted was a return to those wages in force at the end of 1877, or an advance of 15 per cent. in reality. The masters replied that the revival in trade had not yet been sufficient to justify any increase in wages, as prices had not yet improved. A section of the men have held a meeting, at which they approve of forming a new sliding scale. The demand for coal is good, steam qualities being well enquired for both on home and foreign account. The house coal enquiry is also rather more active, but no change has been effected in prices to any material extent. Proprietors still hesitate to take large orders at present prices. Patent fuel is rather slow.

#### GRAND DUCHESS MINE, CARMARTHENSHIRE

Nov. 11.—The cross-cut I instructed to be put out from bottom of new shaft on the Bonville section the last time I was here has intersected one of the Butt group of lodes, and I am pleased to say that it is, as reported by the secretary, "a splendid lode," and worth fully 3 tons per fathom. As this point of intersection is under the costean pits on surface, where we found such large boulders of solid lead ore (some weighing over 200 lbs.), I think our prospects are very encouraging. We shall at once bring up a new adit from the deepest point we can advantageously command on the Bonville side of the hill, and this will attain a depth of about 18 fms. under the cross-cut referred to. At the same time we should prepare to bring up the deep adit from the Towy side, which under the same point will have a cover of 32 fathoms. This section of the property would then be thoroughly opened up, and ventilated from one valley to the other for a distance on the course of the lode of about 500 fathoms.

The grant contains two groups of lodes, running nearly parallel all through the sett, at a distance apart of about 100 fms.—the Butt group and the Smith-shop group. At the Smith-shop we have three lodes within a space of about 10 fathoms. Our new shaft here is being sunk on the middle of these lodes, and the lode at bottom of the shaft is worth about  $\frac{1}{4}$  ton per fathom. After we get this shaft down to 20 fms. we shall cross-cut for the other lodes. In the meantime, we shall costean on the Bonville side for the same lodes, with a view of bringing up a new adit to meet the one started on the Towy side, from which we have already sold a parcel of 23 tons of lead ore by hand-picking.

The Butt group of lodes contained a vein of barytes 3 ft. to 4 ft. wide, and it is of very fine quality. The lead ore is of very fine grain, and containing a good percentage of silver. The last parcel we sold, and which, as I have stated, was dressed without aid of machinery, realised 13l. 15s. per ton.

I think the Bonville side of the hill will be the best to erect the first dressing-floors upon, and we have fixed upon a convenient site within about 200 yards from the turnpike-road, and  $\frac{1}{4}$  miles from Carmarthen railway station. Considerable delay has occurred through unexpected difficulties in the transfer of deeds; but these matters being now satisfactorily arranged we can go ahead to develop the property on both sides of the hill without further hindrance, and with every prospect of success.

JOHN DAVIS.

LEAD ORES.					
Date.	Mines.	Tons.	Price per ton.	Purchasers.	
Nov. 8	Monydd Gorddu	15	£13 13 0	Weston, Son, and Co.	
11	Ile of Man	100	15 3 0	ditto	
13	Roman Gravel	150	11 16 0	Walker, Parker, and Co.	
	ditto	50	11 16 0	Adam Eytton.	
	Van	150	12 15 0	Walker, Parker, and Co.	
	ditto	50	12 13 6	Adam Eytton.	
	Talargoch	45	12 8 6	Walker, Parker, and Co.	
	Maceysreddu	30	12 2 6	ditto	
	Coetan Llys	50	11 12 6	Quirk, Barton, and Co.	
	North Hendre	25	11 12 6	ditto	
	ditto	25	11 12 6	Walker, Parker, and Co.	
	ditto (round)	27½	12 5 0	Adam Eytton.	
	Prince Patrick	40	12 7 6	Walker, Parker, and Co.	
	ditto (round)	10	12 15 0	Quirk, Barton, and Co.	
	Rhydalun	20	12 3 6	Adam Eytton.	

BLÉNDE.					
Date.	Mines.	Tons.	Price per ton.	Purchasers.	
Nov. 6	Monydd Gorddu	20	£2 5 0	Kenrick and Sons.	
12	Talargoch	27½	5 1 0	Vivian and Sons.	
13	Van	50	3 9 0	ditto	
	ditto	50	3 6 0	ditto	
	ditto	50	3 12 6	Villiers Spelter Co.	

**WANTED.**—A WATER WHEEL, 2 feet breast and 30 feet high. Apply to H. D. POCHIN and Co., Quay-street, Salford.

**WANTED.**—An 8-horse power PORTABLE ENGINE, and a 7-feet MORTAR PAN. Address, "B. B. J.," Oxford House, Stokes Croft, Bristol.

**WANTED** a PERSON OF GOOD CONNECTION AND EXPERIENCE as SALESMAN in the METAL TRADE in LONDON. Salary, £150-£200. Apply, by letter, to "Wainwright," care of Deacon's Advertisement Offices, 154, Leadenhall-street, E.C.

#### MANGANESE.

**WANTED, TO PURCHASE, IN REGULAR QUANTITIES.**—Reply, with full particulars, to "S. 163," care of Henry Greenwood, 2, York-street, Covent Garden, London.

#### FLUOR-SPAR.

**WANTED, TO PURCHASE, IN JOB LOTS, OR IN REGULAR QUANTITIES.**—Address, "F. 42," care of Henry Greenwood, 2, York-street, Covent Garden, London.

**WANTED, A FEW GENTLEMEN** to complete a SYNDICATE for the PURCHASE of EXISTING MINING RIGHTS, and the FORMATION INTO a COMPANY of an extensive really good and valuable Sett in the South-West of England. £8000 is required, of which nearly half is already subscribed. Address, "G. D.," Hartman's, Rood-lane, London, E.C.

#### TO CAPITALISTS, PROMOTERS, INVESTORS, &c.

**A MINING ENGINEER** of large experience in the WEST OF ENGLAND is in a position to obtain VALUABLE MINERAL GRANTS for clients on easy terms, and to INTRODUCE PROGRESSIVE PROPERTIES requiring very little additional expenditure to enable considerable returns to be made. With improved trade large profits are certain. Address, "C.B. F.G.S.," MINING JOURNAL Office, 26, Fleet-street, London.

#### TO PARENTS AND GUARDIANS.

**AN ELIGIBLE OPPORTUNITY** is now offered for the SETTLEMENT of an ACTIVE YOUNG GENTLEMAN IN CANADA. He will be enabled to obtain his profession as a Solicitor in five, or if he be a Graduate in three years. Cost of living about £150. In the meantime he will have active work, and obtain a knowledge of the Dominion, which is destined to become one of the most prosperous of the Colonies. Premium, £100 sterling. HERBERT C. JONES, Canada Land and Loan Agency, 32, Wellington-street, Toronto.

#### GYPSUM AND LIMESTONE.

**THE OWNER** of an ESTATE in SUSSEX, under which there is a considerable bed of GYPSUM and LIMESTONE, will be willing to ENTER INTO ARRANGEMENTS with PARTIES OF STANDING, who would UNDERTAKE THE WORKING THEREOF, either in shares or on a royalty. The adjoining property is now in work, and the kilns and machines in action, and a branch railway connected with the South Eastern Railway. For further particulars, apply to J. C. MAPPIN, Broadfield, Reigate.

#### ASBESTOS.

**THE ADVERTISER** CAN OFFER A MINE, the ASBESTOS of which can be delivered in London for about £10 per ton. The selling price is £130 to £150 per ton when prepared; costs £5 per ton preparing (or a contract can be made for any quantity). The Advertiser (who is a well known Chemist) has TWO NEW USES, or applications, for ASBESTOS, both of which will pay well. Also, a newly-invented EXPLOSIVE, which is safer and stronger than Dynamite, FOR SALE. Would suit a company. Apply to "R. P.," 16, St. Michael's-place, Brighton.

#### £100 TO £10,000

**OBTAINABLE BY INVESTING £1 to £20** in BONDS, with INTEREST COUPONS attached, payable to bearer. As safe as the English Funds. Apply to JAMES RUSSELL, 98, London Wall, London, E.C.

#### TO BE SOLD.

**OWING** to the DEATH of the PRINCIPAL PROPRIETOR his SHARES in a PROMISING LEAD MINE, in DENBIGHIRE, NORTH WALES, are now FOR SALE. For particulars, apply to "W. C. P.," Tyddydudai, Amlwch, Anglesey.

#### SOUTH CAMBRIAN MINES.

**TO DISPOSE OF TWO HUNDRED AND FIFTY SHARES**, at a low figure, to an immediate buyer. Advertiser requires the money to carry on his own business. This Mine is proving one of the most valuable in Cardiganshire. See Reports in Mining Journal. Address, "B. G.," 142, Crown-street, Liverpool.

**TO BE TREATED FOR, A VALUABLE MINING SETT**, near ASHBURTON, with ENGINES, PITWORK, and PLANT complete.—Apply, Messrs. WINDEATT and WINDEATT, Solicitors, Totnes, Devon.

**FOR SALE.**—SCREW TUG and WATER BOAT (IRON), 48 ft. by 8½ ft.; TWO 8 in. STEAM PUMPS, with engines and boiler attached, suitable for contractors, &c.; a SCREW YACHT and a SCREW LAUNCH, lengths respectively 60 ft. and 40 ft. ALL CHEAP. Address, "Steamer," at C. H. May and Co.'s General Advertising Offices, 78, Gracechurch-street, London.

#### TO IRONSTONE COMPANIES.

**FOR SALE, THE ROYALTY OF A VALUABLE SEAM** or SEAMS OF IRONSTONE (CLAY CARBONATE), NINETY-FOUR ACRES, situated at IPSTONES, near PROGHALL, STAFFORDSHIRE. For analysis and terms apply to the Owner, Mr. H. J. HALL, Eastfield, Peterborough.

**FOR SALE, THE WHOLE OR PART:**—100 E. Crebor, £1½. 100 South Cambrian, 15s. 70 United Van Consols 100 Bettws-y-Coed, £1 ls. 5 D'Eresby Moun., £30. and Glynn, 10s. 20 Hornachos, £8. 50 Parys Corpora., 17s 6d. Address, H. WILKINS, 3, Heybourne Villas, Tottenham.

**FOR SALE, an excellent BEAM ENGINE**, 18 in. cylinder, 4 ft. stroke, link motion, working high pressure, with indicator, drum, and winding gear, complete, and all in good working order. Apply to Mr. E. J. BARTLETT, No. 30, Great St. Helen's, London, E.C.

**FOR SALE, at NEW PEMBROKE MINE, CORNWALL:**—An excellent 25 in. DRAWING ENGINE and TWO BOILERS. TWO SPARE BOILERS. THREE IRON STAMPS AXLES. 100 fathoms FLAT RODS, 3¼ inch. 10 arm CAPSTAN IRON AXLE. A quantity of ROD PLATES and OTHER MATERIALS. Apply to Mr. JOHN POLKINGHORN, Woodlands, Par Station.

#### SPECIALLY RECOMMENDED TO INVESTORS.

**EAST CREBOR SHARES** have been largely bought during the week. It is the adjoining Mine to CREBOR, and possesses the IDENTICAL Lodes. Every discovery in Crebor enhances the value of East Crebor, which has already sold nearly £40,000 worth of rich copper ore, and in sinking the shaft a few fathoms the junction of Rich Lode with the North Lode will be met with, and in all probability a great deposit of ore discovered. Shares are in great demand at 1¼ to 1½. Plans (showing relative positions of Crebor and East Crebor) of J. SCOTT and Co., Palmerston Buildings, Old Broad-street, E.C.

**MR. EDWARD TRYTHALL**, Purser of the Providence Mines, Lelant, and Spear Moor Mine, St. Just, Penzance, Cornwall, has REMOVED from the "Albert Stores," Penzance, to 35, WALLROOK, LONDON, E.C., where he solicits the commissions of his friends. ALL BUSINESS entrusted to him as a PUBLIC ACCOUNTANT, AUDITOR, &c., will meet with careful and prompt attention.

**MR. WILLIAM BREDEMAYER**, MINING, CONSULTING and CIVIL ENGINEER, U.S. MINERAL SURVEYOR for UTAH and IDAHO, NOTARY PUBLIC. Geological examinations; reports on mining properties; surveys mines, rail roads, and canals, and superintends the workings of the same; prepares estimates and plans for opening and working mines. Expert on mining questions before the Courts. Address, P.O. Box 1157, Salt Lake City, Utah.

#### PRACTICAL MINING AND INSTRUCTION IN SCIENCE.

**MR. B. KITTO, F.G.S.**, Lecturer and Assistant Secretary to the Miners' Association of Cornwall and Devon, is prepared to RECEIVE PRIVATE PUPILS. Field and class lessons in Mineralogy, Geology, Dressing of Ores, &c. Underground training by experienced Mine Agents. For particulars, apply to Mr. B. KITTO, Camborne, Cornwall.

**MR. CHARLES BAWDEN, ST. DAY, SCORRIER, CORNWALL.** From long practical experience is enabled to ADVISE CAPITALISTS as regards the PRESENT PRODUCTIVENESS and PROSPECTIVE VALUE of the different MINES throughout CORNWALL.



CRANSTONHILL ENGINE WORKS, GLASGOW.

## ALEX. CHAPLIN AND CO.

THIS BUSINESS having been ACQUIRED by the SUBSCRIBER (practical partner of the late firm for the past ten years), will henceforth be CARRIED ON BY HIMSELF as SOLE PARTNER, under the same firm of ALEX. CHAPLIN AND CO.

Having arranged to retain the services of those who have managed the details of the business for a number of years, he hopes, from their and his practical experience and personal attention, to merit a continuance of the patronage so long accorded to the firm.

Mr. JOHN CLUGSTON, of 63, Queen Victoria-street, London, E.C., will act as agent for the firm there.

HENRY WILLIAM BALL,  
Glasgow, 11th November, 1879.

## THE PATENT SAFETY GUNCOTTON COMPANY (LIMITED).

IN LIQUIDATION.

THE LIQUIDATORS of this COMPANY are prepared to RECEIVE OFFERS for the PURCHASE of the WORKS and PLANT of this well known undertaking, as a whole or going concern.

THE WORKS, which are situated in STOWMARKET, SUFFOLK, may be viewed by appointment with Mr. E. C. PRENTICE, Stowmarket; or by arrangement with Mr. R. S. ARCHBOLD, at the Company's Office, No. 2, New Broad-street, London, and where also full particulars can be obtained.

E. C. PRENTICE, } Liquidators.  
R. S. ARCHBOLD, }

THE DIRECTORS of THE ENGLISH AND SCOTTISH BOILER INSURANCE COMPANY (LIMITED) are prepared to APPOINT AGENTS on liberal terms.

Apply to the Secretary, 100, King-street, Manchester; or 81, St. George's-place, Glasgow.

## TWO COMPLETE SETS OF ROCK-BORING PLANTS.

FOR SALE, HIRE, OR CONTRACT.—PLANT 1—Consisting of 12 in. by 2 ft. ENGINE and COMPRESSOR; THREE 3 in. ROCK DRILLS; 550 yards 2 in. wrought-iron tube; hose and unions for drills, &c.,—in full working order.

PLANT 2—8 in. ENGINE and COMPRESSOR, with 20 in. stroke; VERTICAL BOILER; drills, hose, and pipes, &c.,—in full working order.

Apply to Mr. J. H. HARRISON, 20, St. Werburgh-street, Chester.

## IMPORTANT DISCOVERY OF SILICA IN SUSSEX.

An INVESTMENT in the SHARES of the SILICA COMPANY (LIMITED) promises a return of greater magnitude than is afforded by many of the most lucrative Dividend-paying Mines.

## THE SILICA COMPANY (LIMITED).

Nominal capital £500, divided into 400 A Shares of £1 each, and 100 B Shares of £1 each, to be paid up in full on allotment.

AUDITORS—Messrs. WILLIAMS AND CO., 13 and 14, King-street, Cheapside, E.C. BANKERS—Messrs. RANSOM, BOUVIER, and CO., 1, Pall Mall East.

SECRETARY—A. J. POULTER, Esq.

THE SHARES of the SILICA COMPANY (LIMITED) are reserved solely for subscribers of the debentures issued upon the security of the HORSE GROVE QUARRIES, in SUSSEX.—*Vide* following advertisements:—

## DISCOVERY OF SILICA IN SUSSEX.

ISSUE OF FOUR HUNDRED FIRST MORTGAGE DEBENTURES of £25 each, bearing interest at the rate of 5 per cent. per annum, payable quarterly, representing a total charge of £10,000, secured upon the FREEHOLD PROPERTY known as the HORSE GROVE QUARRIES, situated at Rotherfield, Sussex, which has been valued on behalf of the METROPOLITAN AND PROVINCIAL LAND CORPORATION at £28,000.

Subscribers for these debentures are privileged to apply for and receive an allotment at par (pro rata) of A Shares in the SILICA COMPANY (LIMITED). Trustees for Debenture Holders: The Rev. Charles W. Williams, D.D., F.R.S., Rector of Christ Church, Brondesbury; and Alfred Ford, Esq., 17, George-street, Hanover-square, W.

Full particulars and sample will be forwarded on application to the Secretary of the Metropolitan and Provincial Land Corporation, No. 86, Regent-street, London, W.

## DISCOVERY OF SILICA IN SUSSEX.

ISSUE OF ONE HUNDRED SECOND MORTGAGE DEBENTURES of £50 each, bearing interest at the rate of 7 per cent. per annum, payable quarterly, representing a total charge of £5,000, secured (after providing for the repayment of the first mortgage of £10,000) upon the above-mentioned property.

Subscribers for these debentures are privileged to apply for and receive an allotment at par (pro rata) of B Shares in the SILICA COMPANY (LIMITED).

## DISCOVERY OF SILICA IN SUSSEX.

THE METROPOLITAN AND PROVINCIAL LAND CORPORATION are authorised to RECEIVE SUBSCRIPTIONS for the DEBENTURES referred to in the foregoing advertisements. A deposit of 10 per cent. is required upon application, and the balance of the full amount of each debenture is payable immediately after allotment, no further liability whatever being incurred.

Full particulars on application to—ERNEST MORETON, Secretary, No. 86, Regent-street, London, W., November, 1879.

## PONTGIBAUD SILVER-LEAD MINING AND SMELTING COMPANY.

THE ORDINARY ANNUAL GENERAL MEETING of the Shareholders of the above company will TAKE PLACE, in Paris, at the offices of the company, No. 15, Rue de l'Oratoire, on SATURDAY, the 29th day of November instant, at Three o'clock P.M. precisely.

The qualification to take part in this meeting is the holding of 20 shares, which must be deposited at the office, in Paris, or at the Agency, in London, ten days before the meeting takes place.

Shareholders may be represented by proxies at the meeting, but no one can be the bearer of a proxy unless he himself is the owner of 20 shares.

Proxies must be upon French stamped paper, and according to the form, which can be obtained at either of the offices of the company.

JOHN TAYLOR AND SONS,  
London Agency: 5, Queen-street-place, 13th November, 1879.

## NEW QUEBRADA COMPANY (LIMITED).

Notice is hereby given, that the ORDINARY GENERAL MEETING of this company will be HELD at the City Terminus Hotel, Cannon-street, on THURSDAY, the 27th day of November, 1879, at Twelve o'clock noon, for the purpose of receiving the directors' report, with balance-sheet and accounts, for the half year ended 30th June last; for the election of directors and auditor; and for transacting the general business of the company.

The Transfer-books will be closed from Thursday, the 20th of November, to Saturday, the 29th November, both days inclusive.

By order of the Board,

N. G. BURCH, Secretary.

Offices of the Company, 2, Walbrook, London, Nov. 8, 1879.

SHAREHOLDERS of the CONSOLIDATED AMADOR VOLCANIC HYDRAULIC MINING COMPANY are hereby notified that at the forthcoming STOCKHOLDERS' ANNUAL MEETING the following will be submitted for their adoption:—

- 1.—To revise the constitution and bye-laws of the company.
- 2.—To declare a dividend out of its earnings.
- 3.—To increase its capital stock from one million dollars to ten (\$10,000,000) millions of dollars, divided into 100,000 shares of \$100 each.
- 4.—To exchange certificates of old shares for new ones, at the rate of ten new shares of \$100 each, for each old share of \$100.

Stockholders only whose shares have been deposited by them, or by their proxies, with the Secretary ten days previous to the date of the annual meeting will be entitled to vote.—San Francisco, Oct. 27, 1879.

ROYAL SCHOOL OF MINES.—PROFESSOR GUTHRIE, F.R.S., will COMMENCE a COURSE of about SIXTY LECTURES on PHYSICS at half-past Eleven A.M., on MONDAY next, the 17th inst., to be continued at the same hour on each succeeding week day, except Saturday. These Lectures will be delivered at South Kensington. Fee for the Course, £4: for the Laboratory Practice, £12.

COURSES OF EVENING LECTURES on some of the SPECIAL APPLICATIONS of PHYSICS to the ARTS are now being organised. These will be commenced at the conclusion of the foregoing Course. Further details will be shortly published.

F. W. RUDLER, Registrar.

J. S. MERRY,

ASSAYER AND ANALYTICAL CHEMIST,  
SWANSEA.

SUPPLIES ASSAY OFFICE REQUIREMENTS AND RE-AGENTS.

## CARNARVONSHIRE.

TO QUARRY AND MINE PROPRIETORS.

MR. DAVID JONES has received instructions TO SELL, BY PUBLIC AUCTION, on Tuesday, 18th November, 1879, at the GWM DWYFOR MINES, distant about 12 miles from PORTMADOC, on the Gorsedd Junction and Portmadoc Railway, the

MINING PLANT, comprising:—

WATER WHEEL, 35 ft. by 4 ft., crusher and connections, drum 10 ft. by 6 ft., ditto 3 ft. by 7 ft., double crab winch, two wire ropes, about 300 yards each, quantity of pump rods of different dimensions, pumps of various sizes, turn-out plates and points, incline rollers and stools, wagons, patent weighing machine, scales and weights, wheel and hand barrows, quantity of air pipes, stoves, pulley wheel and stands, water troughs and stand, iron kibbles, smith's bellows, vice, and tools, grinding stone, quantity of planks, and other timber.

The whole of the above materials are in excellent condition, and most of them as good as new.

Sale to commence at half-past Twelve o'clock.

Further particulars may be obtained on application to Mr. G. J. GRAY, St. Clement's House, Clement's-lane, London, E.C.

Mr. W. GAYE, 16, Chapel-street, Portmadoc, will show the Machinery to any person desirous of inspecting it.

ELIGIBLE INVESTMENT.

CALSTOCK, CORNWALL.

MESSRS. WARD AND CHOWEN WILL SELL, BY PUBLIC AUCTION, on Tuesday, the 25th day of November next, at Two o'clock P.M., the WHOLE of the PLANT, MINE MACHINERY, and MATERIALS, consisting of ONE 25 in. cylinder PUMPING ENGINE and TWO BOILERS; ONE 24 in. cylinder WINDING ENGINE, and ONE BOILER; 90 fathoms of pitwork; 12 rods of stamps; crusher; 30 ft. WATER WHEEL, by 2½ breast; tram rails, wagons, wheel, capstall, shears, whim, rope, and the usual mine requisites, together with the MINE SETT, known as the

PRINCE OF WALES MINE,

Situate in the parish of Calstock, Cornwall, which will be offered for sale at the Court House on the Mine as a going concern, in One Lot.

The mine is held under a lease granted by the Duchy of Cornwall for a term of twenty years, seven of which are unexpired, subject to an annual dead rent of £30, which merges into dues.

A copy of the lease can be seen at the office of the auctioneers.

For viewing the same, apply to Captain ANDREWS, residing at Wheal Crebor, Tavistock; conditions of sale and further particulars, to the Auctioneers, at Burnville, Bristow, and Tavistock, Devon; and of ALEX. KERLY, 14, Great Winchester-street, London.—Dated 13th November, 1879.

LLANELLY, CARMARTHENSHIRE.

IMPORTANT SALE OF VALUABLE IRONWORKS.

MR. S. N. POWELL has received instructions TO SELL, BY AUCTION, at the Mackworth Arms Hotel, Swansea, on Wednesday, November 28th, 1879, at Two o'clock in the afternoon, the EXTENSIVE IRONWORKS known as the

OLD RUDGE IRON WORKS,

At LLANELLY, comprising:—

TWENTY-THREE PUDDLING and HEATING FURNACES, PLATE, MERCHANT, PUDDLE BAR, and GUIDE MILLS; TWO STEAM HAMMERS; and the necessary PLANT, for an output of from 200 to 250 tons per week of finished iron in plates, sheets, merchant, angle iron, and coke tin bars.

For further particulars, apply to R. W. PREL, Esq., Copper Works, Llanelly; the Auctioneer, 18, Park-street, Llanelly; or Messrs. GASKOIN and FRY, Solicitors, Swansea.

IN LIQUIDATION.

IN THE MATTER OF THE COMPANIES ACTS, 1862 AND 1867, AND

IN THE MATTER OF THE ST. HARMON LEAD MINING COMPANY (LIMITED).

TO BE SOLD, BY PUBLIC AUCTION, at the Mart, Tokenhouse Yard, London, on the 15th day of December, 1879, at Two o'clock P.M., by Mr. J. M. KLENCK, by Order of the Liquidators of the above-named Company, the LEASE of the

ST. HARMON LEAD MINE,

Situate at TWILCH, near LLANIDLOES, in the county of MONTGOMERY, WALES.

Also, the VALUABLE PLANT and MACHINERY, as per Inventory, which will be produced at the time of sale.

The property is open for inspection. The lease can be seen at the offices of Mr. ALEXANDER KERLY, 14, Great Winchester-street, London (of whom conditions of sale and an Inventory of Plant and Machinery can be obtained), Solicitor to the Liquidators; also of the Auctioneer—

MR. J. M. KLENCK, Auctioneer,  
4, Bishopsgate-street Without, London.

TO BE SOLD, BY PUBLIC ROUP, within the Faculty Hall, St. George's-place, Glasgow, on Wednesday, the 19th day of November, 1879, at Two o'clock afternoon, the

ESTATE OF RANKINESTON,

In the Parish of COYLTON, and County of AYR, lately occupied by ROBERT SALMOND, within 12 miles of AYR and 4 miles of Dronagan Station, on the Glasgow and South-Western Railway. The lands extend to 1574 acres, whereof 1280 are sound hill pasture, and 300 low ground, of which the greater part is arable.

The remainder of the estate is made up of roads and plantations.

The MANSION HOUSE, to which there is attached a STABLE and COACH-HOUSE, with a well stocked GARDEN and VINERY, contains DINING ROOM, DRAWING ROOM, FOUR BED ROOMS, BATH ROOM, PANTRY, KITCHEN, and usual servants' accommodation. The FARM STEADING, which adjoins the Mansion House, is commodious and in good order.

The LANDS have been for some years in the possession of the proprietor, and immediate entry can be given. The SHEEP STOCK, consisting of 900 Blackfaced Ewes and 230 Lambs (which is much below what the place can carry), can be delivered to the purchaser at a valuation.

The MINERALS, which consist chiefly of a very valuable SEAM OF BLACK-BAND IRONSTONE, from 18 to 30 in. thick, extending under about half the Estate, are let to Messrs. Merry and Cunningham.

William McCure, Overseer, Rankineston, Patna, will point out the boundaries.

For further particulars, apply to KERR, ANDERSONS, MUIR, and MAIN, C.A., 149, West George-street, Glasgow; or to M'GRIGOR, DONALD, and Co., Writers, 172, St. Vincent-street, Glasgow, who have the Titles and Articles of Roup.

## VALUABLE FREEHOLD COLLIERY WITH COAL AND IRONSTONE MINES.

TO BE SOLD, either the WHOLE or PART of LESSOR'S INTEREST in a LARGE FREEHOLD COLLIERY in one of the North Midland Counties, also a LARGE AREA of LEASEHOLD COAL, with power to work thereout as much as possible during eleven years, without any further payment to Lessor.

The coal is of high repute in the London and Southern Markets, and the plant is powerful and efficient, and included in the Lessor's interest, and is capable of raising a minimum of 4000 tons of coal per week. There is ample siding accommodation in connection with the Midland Railway Company's Main Line to London.

The Advertiser would be prepared to CO-OPERATE with the PURCHASER in WORKING the COLLIERY, finding his proportion of Capital for such purposes.

For particulars, apply to Messrs. J. and P. HIGSON, Civil and Mining Engineers, 15, Crown Buildings, Booth Street, Manchester.

SOUTH ROMAN GRAVELS MINES,

IN LIQUIDATION.

FOR SALE, A BARGAIN, a highly finished 22-in. ROTARY BEAM PUMPING and WINDING ENGINE, with link motion, 4 ft. stroke in cylinder, metallic piston, perpendicular pipes, weightposts, working and nozzle gear, all fitted bright, including cast-iron casings for top and bottom nozzles, with bright cover, wrought-iron sweep rod, cast crank, 8-in. wrought-iron shaft, with fly-wheel 14 ft. diameter, 8 in. wrought-iron drum shaft, with two 9 ft. centres and 6 ft. pumping wheel. The engine was made by Messrs. William's Perran Foundry Company, Cornwall, and is in excellent condition, and equal to new in every respect.

To be seen on application to Capt. POWNING, on the Mine (four miles from Minsterley, Salop).

For terms, apply to the Liquidator, 18, Austinfriars, London, E.C.

FOR SALE, A FIRST-CLASS SECOND-HAND 80 in. CORNISH PUMPING ENGINE, with several 11 ton BOILERS.

Apply, WM. BENNETTS, Rosekear, Camborne.

FOR SALE, A NEW 70 inch cylinder CORNISH BEAM PUMPING ENGINE, 10 ft. stroke in cylinder and 9 ft. in the shaft, with steam case, metallic piston, and wrought gudgeon. The false cover, perpendicular pipes, weight posts, working and nozzle gear all fitted bright. A strong substantial well made engine, complete, including cast-iron casings for top and bottom nozzles, with bright cover, holding down bolts and wrought-iron caps and bolts for connection to main rod.

Apply to WILLIAM'S PERRAN FOUNDRY COMPANY, Perranarworthal, Cornwall.

Dated Jan. 29, 1879.

22 IN. AIR COMPRESSOR, on massive bed-plate, with slide bars, connecting rods, and crank, FOR SALE (CHEAP). Improved AIR COMPRESSING ENGINES, with 12 and 9 in. cylinders. Also PAIR of 9 inch WINDING ENGINES complete, with 4 feet drums, geared 3 to 1.

Apply to—

WARSOP and HILL, ENGINEERS, NOTTINGHAM.

PIT SINKING, WINDING COAL, PUMPING, &c.

PORTABLE STEAM ENGINE FOR SALE, with two 13½-inch cylinders, fitted with link-motion reversing gear, large boiler, with or without road travelling wheels, and winding and pumping gear.

Also a double 2½-in. cylinder PORTABLE ENGINE.

A ½-in. cylinder VERTICAL ENGINE, with winding drum, complete.

An 8-in. cylinder VERTICAL HOISTING ENGINE, with winding drum complete. To be seen at—

BARROWS and STEWART'S WORKS, BARNBURY, OXON.

## THE SANDYCROFT FOUNDRY AND ENGINE WORKS COMPANY (LIMITED).

NEAR CHESTER

Late the MOLD FOUNDRY COMPANY. Established 1838.)

MAKERS OF

MINING MACHINERY, CORNISH PUMPING, WINDING, AND EVERY OTHER DESCRIPTIVE OF ENGINE,

PITWORK, BOILERS, FORGINGS, WATER-WHEELS, ORE CRUSHING, STAMPING, AND DRESS MACHINERY,

GOLD AND SILVER AMALGAMATING MACHINERY, MINING TOOLS,

ROCK DRILLS, AIR COMPRESSING ENGINES, and all the necessary accessories for MACHINE BORING.

SPECIAL ATTENTION given to MACHINERY for FOREIGN MINES.

SECOND-HAND MINING MACHINERY FOR SALE.

LONDON AGENTS:—MR. JOHN F. PEARSE,

6, QUEEN STREET PLACE, SOUTHWARK BRIDGE, E.C.

STEEL (OR IRON) TRAMS AND TIPPING TRUCKS! Patented in Europe, America, and British South Africa. Lightest and strongest made.

R. HUDSON,

GILDERSOME FOUNDRY,

NEAR LEEDS.

## NANT-Y-MOCH MINING COMPANY

(LIMITED).

Capital £10,000, in 10,000 Shares of £1 each.

Prospectuses and Shares may be obtained on application to Capt. A. FRANCIS, M.E., Goginan, Aberystwith; or from ERNEST W. S. MURRANT, Esq., 8, St. Benét-place, London, E.C.

## WHEAL UNION TIN AND COPPER MINE COMPANY,

REDRUTH, CORNWALL.

On Land the property of Colonel Buller and others.

5000 Shares. £1 a Share on allotment. Cost Book System, with Monthly Audit by a Public Accountant.

PURSER.

Mr. JOHN THOMAS, The Glebe, Redruth.

MANAGER.

Captain JOHN NICHOLLS, Manager of Violet Seton Mine, &c., and formerly Manager of Prosper United and other mines.

AUDITOR.

A Public Accountant, to be appointed at a meeting of shareholders, which will be held within a month.

BANKERS.

CORNISH BANK (Limited), Redruth, Truro, Falmouth, Penryn, and Helston.

This company is formed to work a piece of virgin ground (lying exactly to the east of and adjoining the Carn Brea Mines), through the entire length of which run the main trunk lodes of the district.

It is intended to erect suitable machinery for pumping, with a rotary engine and air compressor for purposes of winding, boring, &c., to drive a cross-cut through the various lodes, of which there are at least nine that have been found productive to the west, and many also very rich to the east in Pedn-ar-dra, Old Trekerby, &c.

It is intended, however, in the first instance to confine attention to those lodes which have paid such enormous profits, both shallow and in depth, in Dolcoath, Cook's Kitchen, Tincroft, and Carn Brea.

It is believed there is no such piece of unwrought ground to be had in Cornwall. The immense cross-course running from Buller to Old Tolgus (and in connection with which these mines, respectively to the south and north of Wheal Union, turned out such masses of mineral) intersects all the lodes in the act.

The union of granite and killas, or clay-slate, is also in the ground comprised in this grant.

From the present low price of machinery and materials, this is an exceptionally favourable time for starting such an undertaking. There is a certain prospect of a good rise in value of both copper and tin.

This first call of £5000 will erect all the necessary machinery, and carry on the mine for twelve months, after which it is confidently believed a similar amount, to be raised by calls not exceeding 5s. per share, at intervals of not less than three months, will open a lasting and profitable mine.

There will be no other call than the first required until the machinery is erected. There is very little doubt that before this time shares will command a very substantial premium.

This company being started for the purpose of legitimate mining, there will be no promotion money or free shares. A stipulated sum of £500 is to be paid to the vendors for the grants and previous disbursements. They, with the manager, take a considerable share in the undertaking, on which they will have to pay their calls exactly as the rest of the company.

Special attention is called to the feature in the financial management which provides for a monthly audit by a public accountant, to whom the books of the mine will be at all times open.

A considerable number of shares has been allotted privately. Early application is requested, which should be addressed to—

JOHN THOMAS, The Glebe, Redruth, Cornwall; or to

JOHN NICHOLLS, Basset Villas, Camborne, Cornwall.

All cheques should be made payable to "The Purser of Wheal Union," and crossed "Cornish Bank (Limited), Redruth." Reports from Captain John Nicholls; Captain White, manager of Wheal Peavor and West Wheal Peavor; and Captain Rosewarne, manager of Wheal Sisters and other mines, mineral agent for the Rev. St. Aubyn Molesworth St. Aubyn; and a plan of the ground with lodes laid down, which speak for themselves, may be had on application.

It is proposed to CLOSE THE LIST SHORTLY, and immediately after the allotment the first general meeting of shareholders will be held, of which due notice will be given.

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MR. J. T. JOHNSON, Assoc. Inst. C.E., F.G.S., &c., CIVIL and MINING ENGINEER, late of Chester and South Wales, having joined his Brother, Mr. T. M. JOHNSON, who for the last 13 years has been engaged in Mining in Spain and Portugal, is prepared to INSPECT PROPERTIES and CARRY OUT GENERAL MINING and ENGINEERING WORKS in these countries.

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A DIPLOMA—HIGHEST OF ALL AWARDS—given by the Geographical Congress, Paris, 1875—M. Favre, Contractor, having exhibited the McKean Drill alone as the MODEL BORING MACHINE for the St. Gothard Tunnel.

SILVER MEDAL of the Highland and West of Scotland Agricultural Society, 1875—HIGHEST AWARD.

At the south end of the St. Gothard Tunnel, where

## THE MCKEAN ROCK DRILLS

Are exclusively used, the advance made during eight consecutive weeks, ending February 7, was 24'90, 27'60, 24'80, 26'10, 28'30, 27'10, 28'40, 28'70 metres. Total advance of south heading during January was 121'30 metres, or 133 yards.

In a series of comparative trials made at the St. Gothard Tunnel, the McKean Rock Drill continued to work until the pressure was reduced to one-half atmosphere (7½ lbs.), showing almost the entire motive force to be available for the blow against the rock—a result of itself indicating many advantages.

The GREAT WESTERN RAILWAY has adopted these Machines for the SEVERN TUNNEL; the LONDON AND NORTH-WESTERN RAILWAY for the FESTINIOG TUNNEL; and the BRITISH GOVERNMENT for several Public Works. A considerable number of Mining Companies are now using them. Shafts and Galleries are driven at from three to six times the speed of hand labour, according to the size and number of machines employed, and with important saving in cost. The ratio of advantage over hand labour is greatest where the rock is hardest.

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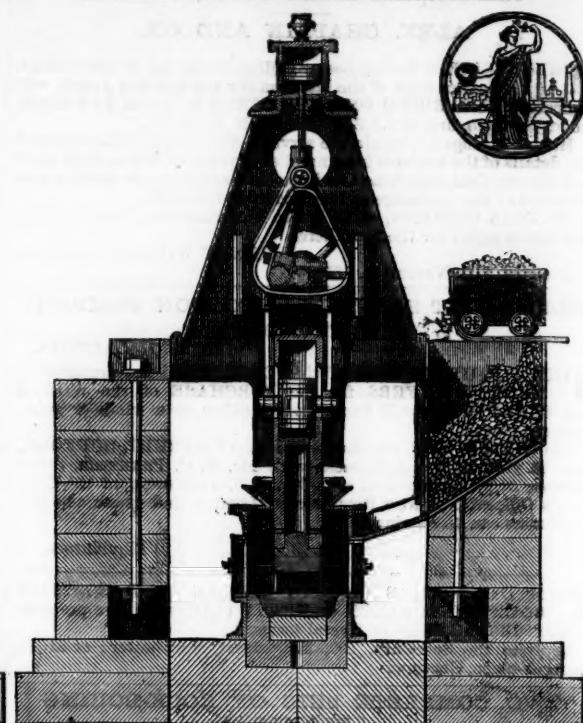
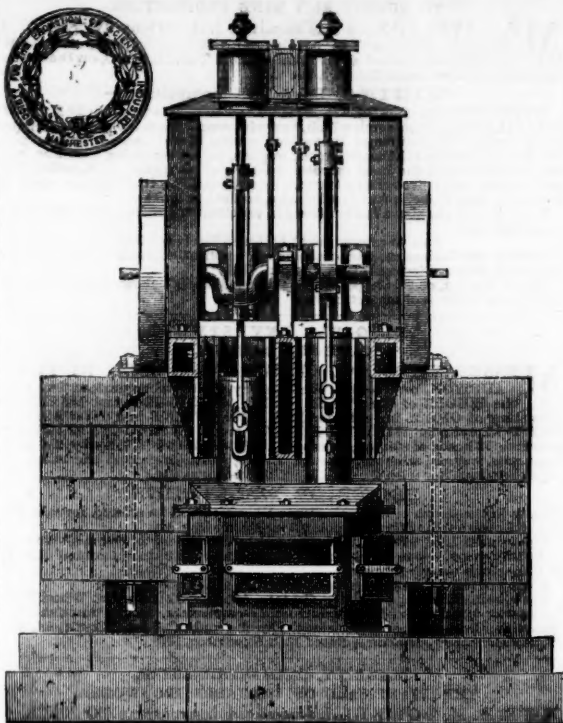
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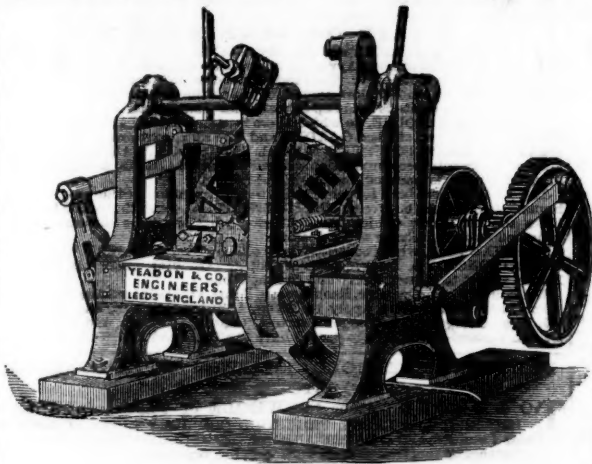
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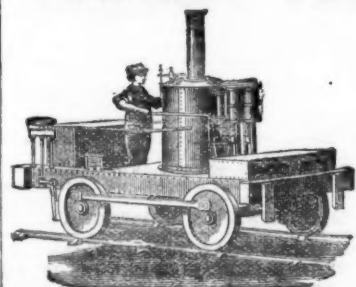
### TESTIMONIALS.

Messrs. Yeadon and Co., Leeds. BERNISSART, NEAR PERUWELZ (BELGIUM), JANUARY 4TH, 1878.  
I continue to be perfectly satisfied with the work performed by the two patent Briquette Machines as well as with that of the Steam Engine, Mixer, &c., which you supplied a few months ago for the manufacture of compressed slack Briquettes, and that I can recommend them as being the best machines I know of, after having carefully studied all the Briquette Machines constructed at home and abroad. (Signed) G. FAGES, General Manager for the Bernissart Collieries.

Messrs. Yeadon and Co., Leeds. BERNISSART, NEAR PERUWELZ, JANUARY 24TH, 1879.  
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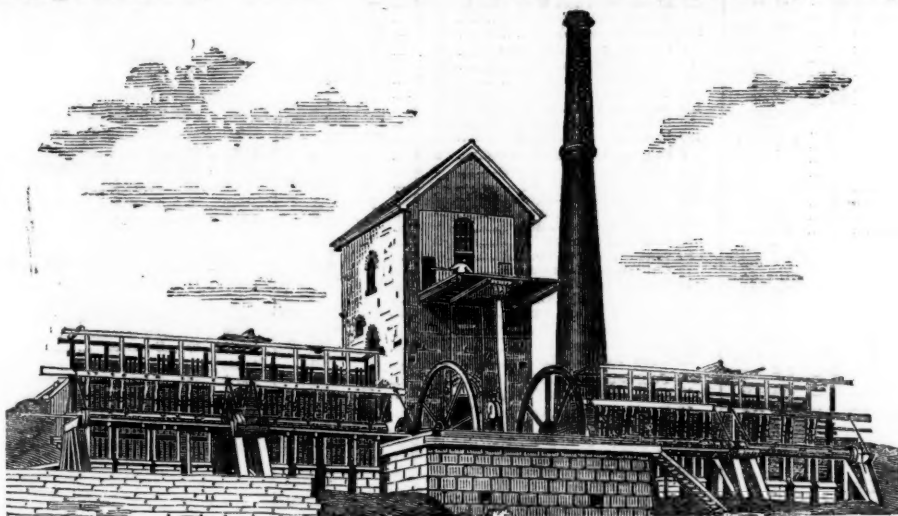
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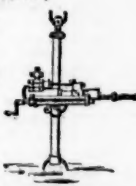
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10240 Devon Gt. Consols, <i>i</i> , Tavistock	1 0 0	5	4 1/2	116 15 0	0 5 0	July 1877			
4296 Dolcoath, <i>i</i> , Camborne	10 14 10	55	54 5/8	114 1 3	0 10 0	Oct. 1879			
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20000 Grogwinton, <i>i</i> , Cardigan	2 0 0	3 1/2	3 1/2	0 14 10	0 10 0	Aug. 1878			
2800 Isle of Man, <i>i</i> , Isle of Man	25 0 0	—	—	82 5 0	0 10 0	Feb. 1879			
20000 Leadhills, <i>i</i> , Lanarkshire	6 0 0	3 1/2	3 1/2	0 15 0	0 3 0	Mar. 1878			
400 Lisburne, <i>i</i> , Cardigan	18 15 0	35	30 3/8	597 10 0	1 0 0	Mar. 1879			
10000 Mellanar Copper, Hayle	2 0 0	4	4 1/2	0 12 0	0 2 0	Nov. 1879			
90000 Miners Mining Co., <i>i</i> , Wrexham	5 0 0	12	11 1/2	68 5 2	0 2 0	Nov. 1879			
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888 North Bury, <i>i</i> , Chacewater	1 14 0	—	4 1/2	1 0 0	0 5 0	Oct. 1878			
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12000 Red Rock, <i>i</i> , Salop	7 10 0	11 1/2	11 1/2	8 5 0	0 5 0	May 1879			
512 South Cardon, <i>i</i> , St. Cleer	1 5 0	55	50 5/8	744 10 0	1 0 0	Nov. 1878			
6123 South Condurrow, <i>i</i> , Camborne	6 6 0	15	13 1/2	5 17 0	0 10 0	Oct. 1879			
4500 South Wheel, <i>i</i> , Illogan	7 12 4	12	11 1/2	38 14 0	0 10 0	Aug. 1879			
12000 Tankerville, <i>i</i> , Salop	6 0 0	5 1/2	5 1/2	4 17 6	0 5 0	Jan. 1877			
6000 Tincroft, <i>i</i> , Pool, Illogan	11 10 0	16 1/2	16 1/2	50 8 6	0 5 0	May 1877			
15000 Van, <i>i</i> , Llanidloes	4 5 0	22 1/2	21 1/2	24 0 0	0 5 0	July 1879			
3000 West Chiverton, <i>i</i> , Penzance	17 5 0	5	4 1/2	55 10 0	0 10 0	Feb. 1878			
512 West Tolgus, <i>i</i> , Redruth	95 10 0	28	25 27 1/2	33 0 0	1 0 0	Jan. 1879			
600 West Wheel Seton, <i>i</i> , Camborne	51 0 0	55	47 1/2	44 0 0	0 15 0	Apr. 1878			
1024 West Eliza Consols, <i>i</i> , St. Austell	18 0 0	—	—	27 10 0	0 2 0	Oct. 1879			
3000 Wheel Pevor, <i>i</i> , Redruth	7 11 0	16	15 1/2	2 8 6	0 15 0	Oct. 1879			

## FOREIGN DIVIDEND MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
35500 Alamillos, <i>i</i> , Spain	2 0 0	2	1 1/2	1 19 9	0 6 0	Oct. 1878
30000 Almada and Tinto Consol., <i>i</i> , Spain	1 0 0	3 1/2	3 1/2	0 6 3	0 1 0	May 1876
20000 Australian, <i>i</i> , South Australia	7 0 0	2	1 1/2	1 3 6	0 2 0	Aug. 1879
20000 Cape Copper Mining, <i>i</i> , South Africa	7 0 0	32	30 3/2	35 17 6	0 10 0	Sept. 1879
35000 Cesena Sulph. Co., <i>i</i> , Romagna, Italy	10 0 0	—	—	0 19 0	0 1 0	Aug. 1879
10000 Copiapo, <i>i</i> , Chili	16 15 0	—	—	7 11 5	0 3 0	May 1877
23500 Eberhard and Aurora, <i>i</i> , Nevada	10 0 0	3 1/2	3 3/2	1 8 0	0 3 0	Dec. 1877
10000 English and Australian, <i>i</i> , S. Aust.	2 10 0	1 1/2	1 1/2	2 17 9	0 1 0	Mar. 1879
25000 Fortuna, <i>i</i> , Spain	2 0 0	5 1/2	4 1/2	7 6 5	0 1 0	Sept. 1879
55000 Frontino & Bolivia, <i>i</i> , New Gran.	2 0 0	2 1/2	2 1/2	0 3 6	0 1 0	Feb. 1879
15000 Linares, <i>i</i> , Spain	3 0 0	5 1/2	4 1/2	17 14 10	0 2 0	Sept. 1879
10000 Pontgibaud, <i>i</i> , France	20 0 0	21	19 21	27 6 9	0 7 0	June 1879
100000 Port Phillip, <i>i</i> , Victoria	1 0 0	3 1/2	3 1/2	1 12 0	0 1 0	Mar. 1879
54000 Richmond Consol., <i>i</i> , Nevada	5 0 0	9 1/2	9 1/2	7 16 0	0 7 0	Nov. 1879
40000 Santa Barbara, <i>i</i> , Brazil	0 10 0	2 1/2	2 1/2	0 8 9	0 1 0	Nov. 1879
120000 Scottish-Australian Mining Co., <i>i</i>	1 0 0	2 1/2	2 1/2	15 p. cent.	—	May 1879
80000 Ditto, New	0 10 0	1 1/2	1 1/2	15 p. cent.	—	May 1879
22500 Sierra Buttes, <i>i</i> , California	2 0 0	2	1 1/2	2 0 6	0 1 0	Apr. 1879
40825 Ditto, Plumas Eureka	2 0 0	3	2 1/2	2 7 0	0 3 0	Oct. 1879
225000 St. John del Rey, <i>i</i> , Chile	270 280	—	—	12 1/2 p. cent. for half-year, June 1879	—	—
25000 Victoria, <i>i</i> , London, <i>i</i> , Australia	1 0 0	3 1/2	3 1/2	0 13 1/2	0 7 1/2	June 1879
2100 W. Prussian (55000 pref. sh. £10 pd.)	10 0 0	10 1/2	10 1/2	1 14 0	0 4 0	Oct. 1879

† Have made calls since last dividend was paid.

## NON-DIVIDEND BRITISH MINES.

Shares.	Paid.	Last wk.	Clos. pr.
2500 Aberllyn, <i>i</i> , <i>i</i> , Carnarvon	10 0 0	11	10 11
12000 Assheton, <i>i</i> , Carnarvonshire	5 0 0	3 1/2	3 1/2
11583 Bedford Unit, <i>i</i> , <i>i</i> , Tavis (1st lib.)	0 4 0	3 1/2	3 1/2
30000 Betwye-y-Oed, <i>i</i> , (20000 sh. issued)	1 0 0	1 1/2	1 1/2
8000 Blaen Gwelan, <i>i</i> , <i>i</i> , Cardigan	3 0 0	—	—
3939 Blue Hills, <i>i</i> , <i>i</i> , St. Agnes	4 6 0	3 1/2	3 1/2
30000 Bodidris, <i>i</i> , <i>i</i> , Denbighshire	1 0 0	1 1/2	1 1/2
200 Botallack, <i>i</i> , <i>i</i> , St. Just	126 5 0	55	80 100
10000 British, <i>i</i> , <i>i</i> , Wrexham	2 0 0	2	1 1/2
256 Brownell, <i>i</i> , <i>i</i> , St. Neot	0 10 0	1 1/2	1 1/2
20000 Bwch United, <i>i</i> , <i>i</i> , (1st lib.) Cardigan	0 12 6	1 1/2	1 1/2
50000 Cambrian, <i>i</i> , <i>i</i> , Cardigan	2 0 0	2	2 1/2
20000 Cen. Foxdale, <i>i</i> , <i>i</i> , of Man (42 sh.)	1 5 0	—	—
5120 Clementina, <i>i</i> , <i>i</i> , Llanrwst	1 0 0	—	—
25000 Coed Mawr Pool, <i>i</i> , <i>i</i> , Carnarvon	2 0 0	—	—
7500 Combella, <i>i</i> , <i>i</i> , Wendron	2 0 0	—	—
8000 Combmartin, <i>i</i> , <i>i</i> , North Devon	0 8 6	5 1/2	5 1/2
2450 Cook's Kitchen, <i>i</i> , <i>i</i> , Illogan	27 4 9	4	6 1/2
10000 Cornw. Great Cons., <i>i</i> , <i>i</i> , Callington	4 0 0	5 1/2	5 1/2
6400 Crook Burn, <i>i</i> , <i>i</i> , Cumberland	0 5 0	3 1/2	3 1/2
14000 Crosswood Mining Lands, <i>i</i>	1 0 0	1 1/2	1 1/2
15000 Cwm Brynno, <i>i</i> , <i>i</i> , Cardigan	2 0 0	2 1/2	2 1/2
15000 Cwm Dryfon, <i>i</i> , <i>i</i> , Wales	1 0 0	—	—
1280 D'Eresby Consols, <i>i</i> , <i>i</i> , Llanrwst	10 0 0	6	4 6
1024 D'Eresby Mountain, <i>i</i> , <i>i</i> , Llanrwst	20 0 0	30	25 35
20000 Denbighshire Consolidated, <i>i</i>	3 0 0	3	2 3
12000 Derwent, <i>i</i> , <i>i</i> , Durham	4 0 0	1 1/2	1 1/2
10000 Dubby Syke, <i>i</i> , <i>i</i> , Durham	0 15 0	6s.	6s.
5000 East Black Craig, <i>i</i> , <i>i</i> , Scotland	5 0 0	—	—
6144 East Oaradon, <i>i</i> , <i>i</i> , St. Cleer	3 4 6	2 1/2	3 3 1/2
1000 East Chiverton, <i>i</i> , <i>i</i> , Penzance	9 10 0	2 1/2	3 1/2
1000 East Craven Moor, <i>i</i> , <i>i</i> , Pateley Bdg.	10 0 0	9	8 9
12000 East Crebhor, <i>i</i> , <i>i</i> , Tavistock	0 10 0	1 1/2	1 1/2
300 East Darren, <i>i</i> , <i>i</i> , Cardigan	32 0 0	—	—
30000 East Florida, <i>i</i> , <i>i</i> , Cardigan	1 0 0	1 1/2	1 1/2
6000 East Goginan, <i>i</i> , <i>i</i> , Cardigan	2 0 0	—	—
10000 East Longstone, <i>i</i> , <i>i</i> , Llanrwst	1 0 0	1 1/2	1 1/2
21000 East Roman Gravel, <i>i</i> , <i>i</i> , Salop	0 10 0	3 1/2	3 1/2
9000 Ditto, 6 per cent. pref. (fully pd.)	1 0 0	—	—
18000 East Van, <i>i</i> , <i>i</i> , Llanidloes	5 0 0	2	2 1/2
1114 East Wheel Lovell, <i>i</i> , <i>i</i> , Helston	10 8 6	2 1/2	2 1/2
6000 Florence, <i>i</i> , <i>i</i> , St. Ive	5 0 0	—	—
12500 Frongoch, <i>i</i> , <i>i</i> , Cardigan (11000 sh. iss.)	2 0 0	2 1/2	2 1/2
3950 Gawton, <i>i</i> , <i>i</i> , Tavistock	4 9 6	3 1/2	3 1/2
14000 Glenroy, <i>i</i> , <i>i</i> , Isle of Man	4 5 0	3 1/2	3 1/2
20000 Gwyn-y-Mynydd, <i>i</i> , <i>i</i> , Flintshire	1 0 0	—	—
20000 Great Dylife, <i>i</i> , <i>i</i> , Montgomery	1 0 0	1 1/2	1 1/2
20000 Gt. E. Foxdale, <i>i</i> , <i>i</i> , of Man (41 sh.)	0 13 0	—	—
12000 Great Holway, <i>i</i> , <i>i</i> , Flintshire	5 0 0	5	4 1/2
6000 Great Wh. Eleanor, <i>i</i> , <i>i</i> , North Bovey	1 17 6	3 1/2	3 1/2
20000 Griffin, <i>i</i> , <i>i</i> , Carnarvon	1 0 0	1 1/2	1 1/2
9880 Gwenslake (Clitters), <i>i</i> , <i>i</i> , <i>i</i>	5 5 0	1 1/2	1 1/2
10000 Gwyn-y-Mynydd, <i>i</i> , <i>i</i> , Flintshire	5 0 0	4 1/2	4 1/2
10000 Harehope Gill, <i>i</i> , <i>i</i> , Durham (41 sh.)	0 5 0	—	—
1200 Harlington Moor, <i>i</i> , <i>i</i> , <i>i</i> , Derby	1 1 0	2	1 1/2
6400 Harwood, <i>i</i> , <i>i</i> , <i>i</i> , Durham	0 15 0	1	1 1/2
3000 Herodotus, <i>i</i> , <i>i</i> , near Llanidloes	1 0 0	2 1/2	2 1/2
8000 Hingston Down, <i>i</i> , <i>i</i> , Calstock	0 6 0	3 1/2	3 1/2
6000 Killfret, <i>i</i> , <i>i</i> , Chacewater	2 12 6	3 1/2	3 1/2
12000 Ladywell, <i>i</i> , <i>i</i> , Salop	2 10 0	1	3 1/2
12000 Ditto, 10 per cent. pref., £1 each.	0 10 0	5 1/2	5 1/2
5000 Lead Era, <i>i</i> , <i>i</i> , Mold	9 10 0	3 1/2	3 1/2
2500 Levant, <i>i</i> , <i>i</i> , St. Just	10 14 6	—	—
6000 Livingston Consols, <i>i</i> , <i>i</i> , St. Agnes	10 10 0	3 1/2	3 1/2
15000 Llandegla, <i>i</i> , <i>i</i> , Llanarmon	1 0 0	1	1 1/2
25000 Llanrwst, <i>i</i> , <i>i</i> , Wales	5 0 0	6 1/2	6 1/2
10000 Lomax, <i>i</i> , <i>i</i> , Penzance	1 0 0	—	—
5120 Lovell, <i>i</i> , <i>i</i> , Wendron	0 18 0	1 1/2	1 1/2
30000 Llanrwst, <i>i</i> , <i>i</i> , Carnarvon	2 0 0	1 1/2	1 1/2
7500 Ditto, 10 per cent. pref.	2 0 0	2 1/2	2 1/2
9000 Marke Valley, <i>i</i> , <i>i</i> , Llanidloes	5 3 6	1 1/2	1 1/2
1800 Mawston, <i>i</i> , <i>i</i> , South Wales	1 0 0	2	1 1/2
6000 Medlyn Moor, <i>i</i> , <i>i</i> , Wendron	3 15 0	—	—
11000 Melyndwr, <i>i</i> , <i>i</i> , Cardigan	3 0 0	—	—
8000 Mineral Corporation of Gt. Britain	10 0 0	13	12 13
11000 Mynydd Gwddu, <i>i</i> , <i>i</i> , Cardigan (Red)	5 0 0	2	1 1/2
12000 Morfa Du, <i>i</i> , <i>i</i> , <i>i</i> , Anglesea	1 0 0	3 1/2	3 1/2
25000 Nant-y-Rhodri, <i>i</i> , <i>i</i> , Cardigan	1 0 0	—	—
4678 New Bronfloyd, <i>i</i> , <i>i</i> , Cardigan (45 sh.)	3 16 0	—	—
12000 New Cathedral, <i>i</i> , <i>i</i> , <i>i</i> , Gwynedd	1 0 0	1 1/2	1 1/2
3000 New Cwmystwith, <i>i</i> , <i>i</i> , Cardigan	5 0 0	—	—
8000 New Dolcoath, <i>i</i> , <i>i</i> , <i>i</i> , Camborne	3 0 0	1 1/2	1 1/2
3500 New Tincroft, <i>i</i> , <i>i</i> , Llanrwst	5 0 0	—	—
4000 North Cornwall, <i>i</i> , <i>i</i> , Cornwall	6 0 0	4 1/2	4 1/2

## NON-DIVIDEND MINES—continued.

Shares.	Paid.	Last wk.	Clos pr.
1000 N. D'Eresby Mount, * <i>i</i> , <i>b</i> , Carnarv.	1 0 0	1 1/2	1 1/2
2000 North Levant, <i>i</i> , <i>c</i> , St. Just	13 6 0	4	3 1/2
50000 North Molton, <i>c</i> , <i>mn</i> , <i>i</i> , Devon	1 0 0	1	—
6000 North Penstruthal, * <i>i</i> , <i>c</i> , Gwennap	0 10 0	1	—
2938 North Treoskerby, <i>c</i> , St. Agnes	8 17 10	—	3/4 1
12000 Pandora, * <i>i</i> , Carnarvon	2 0 0	3/4	3/4 3/4
6000 Park Valley, * <i>s</i> , <i>i</i> , North Devon	0 4 0	—	—
6000 Paracombe, <i>s</i> , <i>i</i> , Devon	0 5 0	—	—
45000 Parys Corporation, * <i>c</i> , Anglesea	1 0 0	1	1 1/2, 1 1/2
7500 Pateley Bridge, <i>i</i> , Yorkshire	1 0 0	3/4	3/4 3/4
15000 Ditto (also 7500 sh. not issued)	0 17 0	—	—
12000 Pen-y-Osred, * <i>i</i> , <i>i</i> , Flintshire	1 0 0	1 1/2	1 1/2
500 Penhalls, <i>t</i> , St. Agnes	3 17 6	3/4	3/4 3/4
1500 Perran Consols, <i>s</i> , <i>i</i> , Perranzabuloe	1 0 0	—	—
12000 Phenix, & W. Phenix, <i>i</i> , <i>c</i> , Link	5 10 3	—	—
7000 Phoenix, <i>i</i> , Holywell, Flintshire	1 0 0	1/2	3/4 3/4
6000 Plympton Mining and Arable	1 0 0	3/4	3/4 3/4
12000 Plymlymmon, <i>i</i> , Llanidloes	2 0 0	6s.	6s.
10000 Port Nigel, * <i>s</i> , <i>i</i> , Carnarvonshire	2 0 0	3/4	3/4 3/4
2000 Prideaux Wood, <i>t</i> , Llanivry	5 0 0	—	—
5182 Prince of Wales, <i>c</i> , Calstock	2 8 0	—	—
5000 Rhychalun, * <i>i</i> , Mold	10 0 0	—	—
15000 Rookehope, <i>i</i> , Durham	1 10 0	—	3/4 3/4
15000 So. Cambrian, * <i>i</i> , Cardiganshire	1 0 0	1 1/2	1 1/2
6000 South Cwmystwith, <i>i</i> , Cardigan	2 0 0	3/4	3/4 3/4
9000 South Darren, <i>i</i> , Cardigan	1 10 0	2 1/2	2 1/2 3
30000 South of Eresby Mountain, <i>i</i>	1 0 0	1 1/2	1 1/2
512 South Dolcoath, <i>c</i> , <i>t</i> , Redruth	12 5 0	—	—
18000 South Roman Gravel, <i>i</i>	1 10 0	3s.	1s. 3s.
8000 South Roskear, <i>t</i> , <i>c</i> , Camborne	8 5 0	—	—
6000 South Tregaron, <i>i</i> , <i>c</i> , Camborne	1 0 0	1 1/2	1 1/2 3/4
40000 South Wheel Croft, <i>c</i> , Tavistock	1 0 0	7 1/2	7 1/2 1 1/2
2043 South Wheel Croft, <i>c</i> , Illogan	15 17 0	7 1/2	7 1/2
6000 St. Lawrence, Amal, <i>i</i> , Flintshire	2 0 0	—	—
10000 St. Patrick, <i>i</i> , Halkin, Holywell	1 0 0	1	3/4 1
30000 Talybont, * <i>s</i> , <i>i</i> , Cardiganshire	1 0 0	—	—
4000 Tamar, <i>s</i> , <i>i</i> , Bearnston	1 0 0	1 1/2	1 1/2 1 1/2
8400 Teedale, <i>i</i> , <i>i</i> , Durham (pref.)	1 0 0	8s.	8s.
10000 Temple, <i>i</i> , Cardigan	1 0 0	—	—
5000 Trelegh Wood, <i>t</i> , Redruth	6 1 0	—	—
12000 Trehellan, <i>s</i> , <i>i</i> , Cranstock	2 0 0	—	—
6000 Truro, * <i>i</i> , <i>i</i> , Nequins, Flintshire	10 0 0	—	—
5000 Ty'n-Fron, * <i>i</i> , Cardigan	0 7 8	1 1/2	1 1/2
5000 Ditto	0 7 8	3/4	3/4 3/4
10000 Van Cons. and Glyn, * <i>i</i> , Llanidloes	2 0 0	3/4	3/4 3/4
1000 Vaughan, * <i>i</i> , Cardiganshire	10 0 0	—	—
18000 Victor, * <i>i</i> , Flintshire (£1 share)	0 5 0	—	—
12000 West Assheton, <i>i</i> , Carnarvon	1 0 0	1 1/2	2 1/2
6000 West Bassett, <i>c</i> , Illogan	7 0 4	11 1/2	10 1/2 11 1/2
5500 West Combmartin, <i>s</i> , <i>i</i> , No. Devon	1 0 0	—	—
7000 Ditto	0 2 6	—	—
3000 W. Craven Moor, <i>i</i> , Pateley Bridge	10 0 0	8	7 8
12000 West Goginan, * Cardiganshire	2 0 0	3/4	3/4 3/4
12000 West Holway, <i>i</i> , Flintshire	1 0 0	1 1/2	1 1/2
6000 West Kitty, <i>t</i> , St. Agnes	0 2 0	—	—
3000 West Mary Ann, <i>i</i> , Menheniot	0 12 6	—	—
189 Westminster Bog Issa, Llanarmon	5 0 0	—	—
20000 W. of England Sp. and L. Sm.	6 0 0	5 1/2	5 5 1/2
12000 West Pateley Bridge, * <i>i</i> , Yorkshire	1 0 0	2 1/2	2 1/2 3/4
1783 West Police, St. Day	11 0 0	—	—
1000 Wt. Roskear, <i>t</i> , <i>s</i> , <i>i</i> , <i>b</i> , <i>c</i> , Camborne	5 10 0	—	—
2048 West Wheel Frances, <i>t</i> , Illogan	29 6 3	12	11 12
3000 West Wheel Peevor, <i>t</i> , Redruth	1 5 0	5	4 1/2 5
12000 West Wye Valley, * <i>i</i> , Montgomery	3 0 0	1	1 1/2
6000 Wheel Agar, <i>c</i> , Illogan	12 10 0	6	5 1/2 6
6144 Wheel Bassett, <i>c</i> , Illogan	33 2 6	3 1/2	3 3 1/2
6000 Wheel Coates, <i>t</i> , St. Agnes	2 0 0	—	—
2585 W. Comford, & No. Treas., Gwennap	1 17 0	3	2 1/2 3
6000 Wheel Goginan, <i>i</i> , Llanarmon	1 0 0	8	5 1/2 6
5179 Wheel Grenville, <i>c</i> , Camborne	4 10 0	5 1/2	5 5 1/2
2048 Wheel Jane, <i>t</i> , Kea	5 13 10	5 1/2	5 5 1/2
4295 Wheel Kitty, <i>t</i> , St. Agnes	5 4 6	3 1/2	2 1/2 3
80 Wheel Owles, <i>t</i> , St. Just	178 15 0	90	95 105
12000 Wheel Russell, <i>c</i> , Tavistock	2 1 6	—	—
1000 Wheel Sisters, <i>t</i> , Lelant	16 10 0	16	15 16
4096 Wheel Uny, <i>t</i> , <i>c</i> , Redruth	15 1 0	2	1 1/2 1 1/2
2324 White Cliff, * <i>i</i> , Llanrwst	5 0 0	—	—
10000 Wye Valley, <i>i</i> , Llanrhydgymry	3 0 0	1	3/4